

ILLINOIS POLLUTION CONTROL BOARD
September 15, 1994

IN THE MATTER OF:)
)
Amendments to 35 Ill. Adm.)
Code 302.302, 302.208, 302.212) R94-1
302.213, 302.407, 304.122 and) (Rulemaking)
304.301 (Ammonia Nitrogen, Lead)
and Mercury))

Proposed Rule First Notice

OPINION AND ORDER OF THE BOARD (by E. Dunham, C. A. Manning and R. C. Flemal)

On February 24, 1994, the Illinois Environmental Protection Agency (Agency) filed a regulatory proposal as part of its mandatory review of the applicable water quality standards of the State of Illinois pursuant to 33 U.S.C. §§ 1251-1387 (1987).¹ The Agency filed the proposal pursuant to Section 27 of the Environmental Protection Act (Act) and the Board's procedural rules at 35 Ill. Adm. Code §§ 102.120 and 102.121.² (415 ILCS 5/27 (1992).) Pursuant to Section 28.2 of the Act and the Board's procedural rules at 35 Ill. Adm. Code § 102.121(e) the Agency certified that the proposed rulemaking is needed to fulfill the requirements of the Federal Clean Water Act and therefore was federally required. (415 ILCS 5/28.2 (1992).) However, the Agency only certified to part of the proposed rulemaking and did not include a written confirmation letter from the United States Environmental Protection Agency (U.S. EPA). Based on the Agency's proposal and certification, the Board on March 17, 1994, rejected that the rulemaking was federally required. The Agency filed a motion to reconsider that determination on April 11, 1994. In its motion for reconsideration, the Agency stated that the entire rulemaking is federally required. Additionally, the Agency attached the confirmation letter from U.S. EPA Region V stating that the proposed changes for the ammonia, mercury and lead standards

¹The Federal Water Pollution Control Act commonly know as the Clean Water Act (CWA) §§ 101-607 requires the Agency to periodically, but at least every three years, review the water quality standards applicable in that State. The Agency refers to this as the "Triennial Review."

²The Agency is proposing to amend 35 Ill. Adm. Code §§ 302.302, 302.208, 302.212, 302.407, 304.122 and 304.301 to update the ammonia nitrogen, mercury and lead general water quality standards, secondary contact and indigenous aquatic life standards and other applicable regulations. In addition, the Agency is proposing to add a new section 35 Ill. Adm. Code 302.213 entitled "Effluent Modified Waters."

would address the inconsistencies of the current State law to the Federal Water Pollution Control Act (FWPCA).³ (33 U.S.C. §1313(c)(2)(A) and §1313(c)(2)(b).) The confirmation letter also states that the proposal would be consistent with the FWPCA and federal regulations. On May 5, 1994, the Board granted the Agency motion for reconsideration and accepted the Agency proposal as a federally required rule pursuant to Section 28.2 of the Act.

Today the Board sends this proposal to first notice, as required by Section 5.01 of the Illinois Administrative Procedure Act. (415 ILCS 100/1005-40). The Board takes this action without ruling on the merit of the proposal and takes no position regarding the substance of the proposal. The proposal is submitted for publication as filed by the Agency. The Board has made only minor nonsubstantive changes to the rules in order to conform to Illinois Administrative Procedure Act and Administrative Code Unit requirements and correct errors. The Board emphasizes that in sending this proposal to first notice at this time will maximize the opportunity for public comment on the proposal. Additionally, the Board has already stated that it places a very high priority on the quick resolution of this rulemaking. Beginning the statutorily-required first notice period at this time will allow for the most expeditious resolution of the proceeding.

The Board's responsibility in this matter arises from the Environmental Protection Act. The Board is charged therein to "determine, define, and implement the environmental control standards applicable in the state of Illinois." (415 ILCS 5/5(b) (1992).) More generally, the Board's rulemaking charge is based on the system of checks and balances integral to the Illinois environmental governance: the Board bears responsibility for the rulemaking and principal adjudicatory functions; while the Agency has primary responsibility for administration of the Act and the Board's regulations. The latter includes administering today's new regulation.

BACKGROUND

This rulemaking is proposing to modify the standards for total ammonia nitrogen, lead and mercury standards. The proposed revised ammonia nitrogen, lead and mercury standards are a follow-up to the establishment of toxics control water quality standard proposed in Proposed Amendments to Title 35 Subtitle C (Toxics Control), R88-21. The Agency also considered the treatment abilities of wastewater treatment plants during the winter months in determining the modified nitrogen standard. (See

³The FWPCA is also know as the Clean Water Act(CWA). (40 C.F.R. §131.11(a)(1) and (2).)

Amendment to 35 Ill. Adm. Code Section 304.301, Exception for Ammonia Nitrogen Water Quality Violations, R88-22.)

In this proposal, the Agency also corrects the STORET number in 35 Ill. Adm. Code 302.407. The correct STORET number for un-ionized ammonia (as N) is 00612. The Agency also amends the effluent standard in 35 Ill. Adm. Code 304.122. The Agency recognizes an inherent relationship between water quality standard and effluent limitations.

ORDER

The Board directs the Clerk to cause publication of the following amendments in the Illinois Register for first notice:

TITLE 35: ENVIRONMENTAL PROTECTION

SUBTITLE C: WATER POLLUTION

CHAPTER I: POLLUTION CONTROL BOARD

PART 302

WATER QUALITY STANDARDS

SUBPART A: GENERAL WATER QUALITY PROVISIONS

Section	
302.100	Definitions
302.101	Scope and Applicability
302.102	Allowed Mixing, Mixing Zones and ZIDs
302.103	Stream Flows
302.104	Main River Temperatures
302.105	Nondegradation

SUBPART B: GENERAL USE WATER
QUALITY STANDARDS

Section	
302.201	Scope and Applicability
302.202	Purpose
302.203	Offensive Conditions
302.204	pH
302.205	Phosphorus
302.206	Dissolved Oxygen
302.207	Radioactivity
302.208	Numeric Standards for Chemical Constituents
302.210	Other Toxic Substances
302.211	Temperature
302.212	Ammonia Nitrogen and Un-ionized Ammonia
<u>302.213</u>	<u>Effluent Modified Waters (Ammonia)</u>

SUBPART C: PUBLIC AND FOOD
PROCESSING WATER SUPPLY STANDARDS

Section	
302.301	Scope and Applicability
302.302	Algicide Permits
302.303	Finished Water Standards
302.304	Chemical Constituents
302.305	Other Contaminants
302.306	Fecal Coliform

SUBPART D: SECONDARY CONTACT AND
INDIGENOUS AQUATIC LIFE STANDARDS

Section	
302.401	Scope and Applicability
302.402	Purpose
302.403	Unnatural Sludge
302.404	pH
302.405	Dissolved Oxygen
302.406	Fecal Coliform (Repealed)
302.407	Chemical Constituents
302.408	Temperature
302.409	Cyanide
302.410	Substances Toxic to Aquatic Life

SUBPART E: LAKE MICHIGAN WATER
QUALITY STANDARDS

Section	
302.501	Scope and Applicability
302.502	Dissolved Oxygen
302.503	pH
302.504	Chemical Constituents
302.505	Fecal Coliform
302.506	Temperature
302.507	Existing Sources on January 1, 1971
302.508	Sources under Construction But Not in Operation on January 1, 1971
302.509	Other Sources

SUBPART F: PROCEDURES FOR
DETERMINING WATER QUALITY CRITERIA

Section	
302.601	Scope and Applicability
302.603	Definitions
302.604	Mathematical Abbreviations
302.606	Data Requirements
302.612	Determining the Acute Aquatic Toxicity Criterion for an Individual Substance - General Procedures
302.615	Determining the Acute Aquatic Toxicity Criterion -

- 302.618 Toxicity Independent of Water Chemistry
Determining the Acute Aquatic Toxicity Criterion -
Toxicity Dependent on Water Chemistry
- 302.621 Determining the Acute Aquatic Toxicity Criterion -
Procedures for Combinations of Substances
- 302.627 Determining the Chronic Aquatic Toxicity Criterion for an
Individual Substance - General Procedures
- 302.630 Determining the Chronic Aquatic Toxicity Criterion -
Procedure for Combination of Substances
- 302.633 The Wild and Domestic Animal Protection Criterion
- 302.642 The Human Threshold Criterion
- 302.645 Determining the Acceptable Daily Intake
- 302.648 Determining the Human Threshold Criterion
- 302.651 The Human Nonthreshold Criterion
- 302.654 Determining the Risk Associated Intake
- 302.657 Determining the Human Nonthreshold Criterion
- 302.658 Stream Flow for Application of Human Nonthreshold
Criterion
- 302.660 Bioconcentration Factor
- 302.663 Determination of Bioconcentration Factor
- 302.666 Utilizing the Bioconcentration Factor
- 302.669 Listing of Derived Criteria

Appendix A References to Previous Rules

Appendix B Sources of Codified Sections

AUTHORITY: Implementing Section 13 and authorized by Section 27 of the Environmental Protection Act (~~Ill. Rev. Stat. 1991, ch. 111 $\frac{1}{2}$, pars. 1013 and 1027~~) (415 ILCS 5/13 and 27 (1992)).

SOURCE: Filed with the Secretary of State January 1, 1978; amended at 2 Ill. Reg. 44, p. 151, effective November 2, 1978; amended at 3 Ill. Reg. 20, p. 95, effective May 17, 1979; amended at 3 Ill. Reg. 25, p. 190, effective June 21, 1979; codified at 6 Ill. Reg. 7818, ~~effective June 22, 1982~~; amended at 6 Ill. Reg. 11161, effective September 7, 1982; amended at 6 Ill. Reg. 13750, effective October 26, 1982; peremptory amendments at 10 Ill. Reg. 461, effective December 23, 1985; amended in R87-27 at 12 Ill. Reg. 9911, effective May 27, 1988; amended in R85-29 at 12 Ill. Reg. 12082, effective July 11, 1988; amended in R88-1 at 13 Ill. Reg. 5998, effective April 18, 1989; amended in R88-21(A) at 14 Ill. Reg. 2899, effective February 13, 1990; added at 14 Ill. Reg. 11979, effective July 9, 1990; amended in R94-1 at _____ Ill. Reg. _____, effective _____.

Section 302.202 Purpose

The general use standards will protect the State's water for aquatic life (except as provided in Section 302.213), wildlife, agricultural use, secondary contact use and most industrial uses and ensure the aesthetic quality of the State's aquatic environment. Primary contact uses are protected for all general use waters whose physical configuration permits such use.

(Source: Amended at 18 Ill. Reg. _____, effective _____
_____)

Section 302.208 Numeric Standards for Chemical Constituents

- a) The acute standard (AS) for the chemical constituents listed in subsection (d)e shall not be exceeded at any time except as provided in subsection (e)d.
- b) The chronic standard (CS) for the chemical constituents listed in subsection (d)e shall not be exceeded by the arithmetic average of at least four consecutive samples collected over any period of at least four days, except as provided in subsection (e)d. The samples used to demonstrate compliance or lack of compliance with a CS must be collected in a manner which assures an average representative of the sampling period.
- c) The human health standard (HHS) for the chemical constituents listed in subsection (f) shall not be exceeded when the stream flow is at or above the harmonic mean pursuant to Section 302.658 nor shall an annual average based on at least eight samples collected in a manner representative of the sample period exceed the HHS except as provided in subsection (d).
- de) In waters where mixing is allowed pursuant to Section 302.102, the following apply:
 1. The AS shall not be exceeded in any waters except for those waters for which the Agency has approved a ZID pursuant to Section 302.102.
 2. The CS shall not be exceeded outside of waters in which mixing is allowed pursuant to Section 302.102.
 3. The HHS shall not be exceeded outside of waters in which mixing is allowed pursuant to Section 302.102.

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Constituent	Storet Number	AS (ug/L)	CS ug/L
Arsenic (total)	01002	360	190
Cadmium (total)	01027	exp[A+Bln(H)], but not to exceed 50 ug/L, where A=-2.918 and B=1.128	exp [A+Bln(H)] where A=-3.490 and B=0.7852
Chromium (total hexavalent)	01032	16	11
Chromium (total trivalent)	01033	exp[A+Bln(h)] where A=3.688 and B=0.8190	exp[A+Bln(H)] where A=1.561 and B=0.8190
Copper (total)	01042	exp[A+Bln(H)] where A=-1.464 and B=0.9422	exp[A+Bln(H)] where A=-1.465 and B=0.8545
Cyanide	00718	22	5.2
Lead (total)	01051	exp[A+Bln(H)] but not to exceed 100 ug/L where A= -1.460 <u>-1.301</u> and B=1.273	Not Applied <u>exp[A+Bln(H)]</u> , where A= <u>-2.863</u> and B= <u>1.273</u>
Mercury	71900	0.5 <u>2.6</u>	Not Applied <u>1.3</u>
TRC	500600	19	11
where:	ug/L	=	microgram per liter,
	exp[x]	=	base neutral logarithms raised to the x- power, and
	ln(H)	=	natural logarithm of Hardness (STORET 00900).

f)

<u>Constituent</u>	<u>STORET Number</u>	<u>(ug/L)</u>
<u>Mercury</u>	<u>71900</u>	<u>0.012</u>

where ug/L = micrograms per liter

ge) Concentrations of the following chemical constituents shall not be exceeded except in waters for which mixing is allowed pursuant to Section 302.102.

<u>Constituent</u>	<u>Unit</u>	<u>STORET Number</u>	<u>Standard</u>
Barium (total)	mg/L	01007	5.0
Boron (total)	mg/L	01022	1.0
Chloride (total)	mg/L	00940	500.
Fluoride	mg/L	00951	1.4
Iron (dissolved)	mg/L	01046	1.0
Manganese (total)	mg/L	01055	1.0
Nickel (total)	mg/L	01067	1.0
Phenols	mg/L	32730	0.1
Selenium (total)	mg/L	01147	1.0
Silver (total)	ug/L	01077	5.0
Sulfate	mg/L	00945	500.
Total Dissolved Solids	mg/L	70300	1000.
Zinc (total)	mg/L	01092	1.0

where: mg/L = milligram per liter and
ug/L = microgram per liter

(Source: Amended at 18 Ill. Reg. _____, effective _____)

Section 302.212 Total Ammonia Nitrogen and Un-ionized Ammonia

- a) Total ammonia nitrogen (as N: STORET ~~Storet~~ Number 00610) shall in no case exceed 15 mg/l.
- b) ~~If ammonia nitrogen is less than 15 mg/l and greater than or equal to 1.5 mg/l, then un-ionized ammonia (as N) shall not exceed 0.04 mg/l.~~
- b) Un-ionized ammonia nitrogen (as N: STORET Number 00612) shall not exceed the acute and chronic standards given below subject to the provisions of Section 302.208(a) and (b), and 302.213.
- 1) From April through October the Acute Standard (AS) shall be 0.3 mg/l and the Chronic Standard (CS) shall be 0.05 mg/l.
- 2) From November through March the AS shall be 0.11 mg/l and the CS shall be 0.02 mg/l.
- e) ~~Ammonia nitrogen concentrations of less than 1.5 mg/l are lawful regardless of un-ionized ammonia concentration.~~
- cd) For purposes of this section the concentration of un-ionized ammonia nitrogen as N and total ammonia nitrogen as N shall be computed according to the following equations:

$$U = \frac{1.0013N}{(1+10^x)}$$

$$U = \frac{N}{[0.94412(1+10^x) + 0.05591]}$$

$$\text{and } N = U [0.94412(1+10^x) + 0.05591]$$

$$\text{where: } X = 0.9018 + \frac{2729.92}{(T + 273.16)} - \text{pH}$$

U = Concentration of un-ionized ammonia as N in mg/l

N = Concentration of ammonia nitrogen as N in mg/l

T = Temperature in degrees Celsius

- de) The following tables indicates the maximum total ammonia nitrogen concentrations (mg/l as N) allowable pursuant to subsections (a) and (b) for certain combinations of pH and temperature.

~~AMMONIA NITROGEN~~
~~WATER QUALITY STANDARD (mg/l)~~

TEMP.		pH						
<u>°C</u>	<u>(°F)</u>	<u>6.0</u>	<u>6.5</u>	<u>7.0</u>	<u>7.5</u>	<u>8.0</u>	<u>8.5</u>	<u>9.0</u>
5	(41)	15	15	15	9.6	3.1	1.5	1.5
10	(50)	15	15	15	6.5	2.1	1.5	1.5
15	(59)	15	15	13.9	4.4	1.5	1.5	1.5
20	(68)	15	15	9.6	3.1	1.5	1.5	1.5
25	(77)	15	15	6.7	2.1	1.5	1.5	1.5
30	(86)	15	14.9	4.7	1.5	1.5	1.5	1.5
35	(95)	15	10.7	3.4	1.5	1.5	1.5	1.5

1) Summer (April through October) Acute

<u>°F</u>	<u>pH</u> <u>°C</u>	<u>6.50</u>	<u>7.00</u>	<u>7.50</u>	<u>7.75</u>	<u>8.00</u>	<u>8.25</u>	<u>8.50</u>	<u>9.00</u>
32	0.0	15.00	15.00	15.00	15.00	15.00	15.00	11.17	3.74
35	1.7	15.00	15.00	15.00	15.00	15.00	15.00	9.75	3.29
40	4.4	15.00	15.00	15.00	15.00	15.00	13.67	7.82	2.68
45	7.2	15.00	15.00	15.00	15.00	15.00	10.98	6.31	2.20
50	10.0	15.00	15.00	15.00	15.00	15.00	8.88	5.12	1.82
55	12.8	15.00	15.00	15.00	15.00	12.59	7.21	4.19	1.53
60	15.6	15.00	15.00	15.00	15.00	10.25	5.89	3.45	1.29
65	18.3	15.00	15.00	15.00	14.68	8.38	4.85	2.86	1.11
70	21.1	15.00	15.00	15.00	12.03	6.90	4.01	2.39	0.96
75	23.9	15.00	15.00	15.00	9.90	5.70	3.34	2.01	0.84
80	26.7	15.00	15.00	14.34	8.19	4.74	2.80	1.70	0.74
85	29.4	15.00	15.00	11.88	6.81	3.96	2.36	1.46	0.67
90	32.2	15.00	15.00	9.89	5.69	3.33	2.00	1.26	0.60

2) Summer (April through October) Chronic

<u>°F</u>	<u>pH</u> <u>°C</u>	<u>6.50</u>	<u>7.00</u>	<u>7.50</u>	<u>7.75</u>	<u>8.00</u>	<u>8.25</u>	<u>8.50</u>	<u>9.00</u>
<u>32</u>	<u>0.0</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>10.24</u>	<u>5.78</u>	<u>3.27</u>	<u>1.86</u>	<u>0.62</u>
<u>35</u>	<u>1.7</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>8.91</u>	<u>5.03</u>	<u>2.85</u>	<u>1.63</u>	<u>0.55</u>
<u>40</u>	<u>4.4</u>	<u>15.00</u>	<u>15.00</u>	<u>12.58</u>	<u>7.10</u>	<u>4.01</u>	<u>2.28</u>	<u>1.30</u>	<u>0.45</u>
<u>45</u>	<u>7.2</u>	<u>15.00</u>	<u>15.00</u>	<u>10.06</u>	<u>5.68</u>	<u>3.22</u>	<u>1.83</u>	<u>1.05</u>	<u>0.37</u>
<u>50</u>	<u>10.0</u>	<u>15.00</u>	<u>15.00</u>	<u>8.09</u>	<u>4.57</u>	<u>2.59</u>	<u>1.48</u>	<u>0.85</u>	<u>0.30</u>
<u>55</u>	<u>12.8</u>	<u>15.00</u>	<u>15.00</u>	<u>6.53</u>	<u>3.69</u>	<u>2.10</u>	<u>1.20</u>	<u>0.70</u>	<u>0.25</u>
<u>60</u>	<u>15.6</u>	<u>15.00</u>	<u>15.00</u>	<u>5.29</u>	<u>3.00</u>	<u>1.71</u>	<u>0.98</u>	<u>0.57</u>	<u>0.22</u>
<u>65</u>	<u>18.3</u>	<u>15.00</u>	<u>13.52</u>	<u>4.31</u>	<u>2.45</u>	<u>1.40</u>	<u>0.81</u>	<u>0.48</u>	<u>0.18</u>
<u>70</u>	<u>21.1</u>	<u>15.00</u>	<u>11.04</u>	<u>3.53</u>	<u>2.00</u>	<u>1.15</u>	<u>0.67</u>	<u>0.40</u>	<u>0.16</u>
<u>75</u>	<u>23.9</u>	<u>15.00</u>	<u>9.05</u>	<u>2.90</u>	<u>1.65</u>	<u>0.95</u>	<u>0.56</u>	<u>0.33</u>	<u>0.14</u>
<u>80</u>	<u>26.7</u>	<u>15.00</u>	<u>7.45</u>	<u>2.39</u>	<u>1.37</u>	<u>0.79</u>	<u>0.47</u>	<u>0.28</u>	<u>0.12</u>
<u>85</u>	<u>29.4</u>	<u>15.00</u>	<u>6.15</u>	<u>1.98</u>	<u>1.14</u>	<u>0.66</u>	<u>0.39</u>	<u>0.24</u>	<u>0.11</u>
<u>90</u>	<u>32.2</u>	<u>15.00</u>	<u>5.10</u>	<u>1.65</u>	<u>0.95</u>	<u>0.56</u>	<u>0.33</u>	<u>0.21</u>	<u>0.10</u>

3) Winter (November through March) Acute

<u>°F</u>	<u>pH</u> <u>°C</u>	<u>6.50</u>	<u>7.00</u>	<u>7.50</u>	<u>7.75</u>	<u>8.00</u>	<u>8.25</u>	<u>8.50</u>	<u>9.00</u>
<u>32</u>	<u>0.0</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>12.71</u>	<u>7.20</u>	<u>4.10</u>	<u>1.37</u>
<u>35</u>	<u>1.7</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>11.07</u>	<u>6.27</u>	<u>3.58</u>	<u>1.21</u>
<u>40</u>	<u>4.4</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>8.83</u>	<u>5.01</u>	<u>2.87</u>	<u>0.98</u>
<u>45</u>	<u>7.2</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>12.50</u>	<u>7.08</u>	<u>4.03</u>	<u>2.31</u>	<u>0.81</u>
<u>50</u>	<u>10.0</u>	<u>15.00</u>	<u>15.00</u>	<u>15.00</u>	<u>10.05</u>	<u>5.70</u>	<u>3.25</u>	<u>1.88</u>	<u>0.67</u>
<u>55</u>	<u>12.8</u>	<u>15.00</u>	<u>15.00</u>	<u>14.36</u>	<u>8.12</u>	<u>4.62</u>	<u>2.64</u>	<u>1.54</u>	<u>0.56</u>
<u>60</u>	<u>15.6</u>	<u>15.00</u>	<u>15.00</u>	<u>11.64</u>	<u>6.60</u>	<u>3.76</u>	<u>2.16</u>	<u>1.26</u>	<u>0.47</u>

4) Winter (November through March) Chronic

<u>°F</u>	<u>pH</u> <u>°C</u>	<u>6.50</u>	<u>7.00</u>	<u>7.50</u>	<u>7.75</u>	<u>8.00</u>	<u>8.25</u>	<u>8.50</u>	<u>9.00</u>
<u>32</u>	<u>0.0</u>	<u>15.00</u>	<u>15.00</u>	<u>7.27</u>	<u>4.09</u>	<u>2.31</u>	<u>1.31</u>	<u>0.74</u>	<u>0.25</u>
<u>35</u>	<u>1.7</u>	<u>15.00</u>	<u>15.00</u>	<u>6.32</u>	<u>3.56</u>	<u>2.01</u>	<u>1.14</u>	<u>0.65</u>	<u>0.22</u>
<u>40</u>	<u>4.4</u>	<u>15.00</u>	<u>15.00</u>	<u>5.03</u>	<u>2.84</u>	<u>1.61</u>	<u>0.91</u>	<u>0.52</u>	<u>0.18</u>
<u>45</u>	<u>7.2</u>	<u>15.00</u>	<u>12.69</u>	<u>4.03</u>	<u>2.27</u>	<u>1.29</u>	<u>0.73</u>	<u>0.42</u>	<u>0.15</u>
<u>50</u>	<u>10.0</u>	<u>15.00</u>	<u>10.19</u>	<u>3.23</u>	<u>1.83</u>	<u>1.04</u>	<u>0.59</u>	<u>0.34</u>	<u>0.12</u>
<u>55</u>	<u>12.8</u>	<u>15.00</u>	<u>8.21</u>	<u>2.61</u>	<u>1.48</u>	<u>0.84</u>	<u>0.48</u>	<u>0.28</u>	<u>0.10</u>
<u>60</u>	<u>15.6</u>	<u>15.00</u>	<u>6.65</u>	<u>2.12</u>	<u>1.20</u>	<u>0.68</u>	<u>0.39</u>	<u>0.23</u>	<u>0.09</u>

(Source: Amended at 18 Ill. Reg. _____,
effective _____)

Section 302.213 Effluent Modified Waters (Ammonia)

- a) Effluent modified waters are those waters or portions of waters that the Agency has determined pursuant to 35 Ill. Adm. Code 309, Subpart A, to have the potential to exceed, and are therefore not subject to, the chronic ammonia standards of Section 302.212(b) downstream of an effluent outfall and outside of any allowable mixing zone. The Agency shall not identify a waterbody as an effluent modified water if it:
- 1) receives effluent discharges that do not meet the requirements of 35 Ill. Adm. Code 304.122(d) prior to dilution with the receiving water;
 - 2) Has uses known to be adversely impacted by ammonia as designated under 35 Ill. Adm. Code 303.201 outside of any allowable mixing zone; and
 - 3) exceeds the acute standard of Section 302.212(b).

(Source: Added at 18 Ill. Reg. _____, effective _____)

Section 302.407 Chemical Constituents

Concentrations of other chemical constituents shall not exceed the following standards:

CONSTITUENTS	STORET NUMBER	CONCENTRATION (mg/l)
Ammonia Un-ionized (as N*)	006192	0.1
Arsenic (total)	01002	1.0
Barium (total)	01007	5.0
Cadmium (total)	01027	0.15
Chromium (total hexavalent)	01032	0.3
Chromium (total trivalent)	01033	1.0
Copper (total)	01042	1.0
Cyanide (total)	00720	0.10
Fluoride (total)	00951	15.0
Iron (total)	01045	2.0
Iron (dissolved)	01046	0.5
Lead (total)	01051	0.1

Manganese (total)	01055	1.0
Mercury (total)	71900	0.0005
Nickel (total)	01067	1.0
Oil, fats and grease	00550, 00556 or 00560	15.0**
Phenols	32730	0.3
Selenium (total)	01147	1.0
Silver	01077	1.1
Zinc (total)	01092	1.0
Total Dissolved Solids	70300	1500

*For purposes of this section the concentration of un-ionized ammonia shall be computed according to the following equation:

$$U = \frac{N}{[0.94412(1 + 10^X) + 0.0559]} \quad \text{where:}$$

$$X = 0.09018 + \frac{2729.92}{(T + 273.16)} - \text{pH}$$

U = Concentration of un-ionized ammonia as N in mg/l

N = Concentration of ammonia nitrogen as N in mg/l

T = Temperature in degrees Celsius

**Oil shall be analytically separated into polar and non-polar components if the total concentration exceeds 15 mg/l. In no case shall either of the components exceed 15 mg/l (i.e., 15 mg/l polar materials and 15 mg/l non-polar materials).

(Source: Amended at 18 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION

SUBTITLE C: WATER POLLUTION

CHAPTER I: POLLUTION CONTROL BOARD

PART 304
EFFLUENT STANDARDS

SUBPART A: GENERAL EFFLUENT STANDARDS

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304.104	Averaging
304.105	Violation of Water Quality Standards
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304.214	Mobil Oil Refinery Ammonia Discharge
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304.219	North Shore Sanitary District phosphorus Discharges
304.220	East St. Louis Treatment Facility, Illinois-American Water Company
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304.222	Intermittent Discharge of TRC

SUBPART C: TEMPORARY EFFLUENT STANDARDS

Section	
304.301	Exception for Ammonia Nitrogen Water Quality Violations (<u>Repealed</u>)
304.302	City of Joliet East Side Wastewater Treatment Plant
304.303	Amerock Corporation, Rockford Facility

Appendix A References to Previous Rules

AUTHORITY: Implementing Section 13 and authorized by Section 27 of the Environmental Protection Act (~~Ill. Rev. Stat. 1991, ch. 111^{1/2}, pars. 1013 and 1027~~) (415 ILCS 5/13 and 27 (1992)).

SOURCE: Filed with the Secretary of State January 1, 1978; amended at 2 Ill. Reg. 30, p. 343, effective July 27, 1978; amended at 2 Ill. Reg. 44, p. 151, effective November 2, 1978; amended at 3 Ill. Reg. 20, p. 95, effective May 17, 1979; amended at 3 Ill. Reg. 25, p. 190, effective June 21, 1979; amended at 4 Ill. Reg. 20, p. 53 effective May 7, 1980; amended at 6 Ill. Reg. 563, effective December 24, 1981; codified at 6 Ill. Reg. 7818; amended at 6 Ill. Reg. 11161, effective September 7, 1982; amended at 6 Ill. Reg. 13750, effective October 26, 1982; amended at 7 Ill. Reg. 3020, effective March 4, 1983; amended at 7 Ill. Reg. 8111, effective June 23, 1983; amended at 7 Ill. Reg. 14515, effective October 14, 1983; amended at 7 Ill. Reg. 14910, effective November 14, 1983; amended at 7 Ill. Reg. 14910, effective November 14, 1983; amended at 8 Ill. Reg. 1600, effective January 18, 1984; amended at 8 Ill. Reg. 3687, effective March 14, 1984; amended at 8 Ill. Reg. 8237, effective June 8, 1984; amended at 9 Ill. Reg. 1379, effective January 21, 1985; amended at 9 Ill. Reg. 4510, effective March 22, 1985; peremptory amendment at 10 Ill. Reg. 456, effective December 23, 1985; amended at 11 Ill. Reg. 3117, effective January 28, 1987; amended in R84-13 at 11 Ill. Reg. 7291 effective April 3, 1987; amended in R86-17(A) at 11 Ill. Reg. 14748, effective August 24, 1987; amended in R84-16 at 12 Ill. Reg. 2445, effective January 15, 1988; amended in R83-23 at 12 Ill. Reg. 8658, effective May 10, 1988; amended in R87-27 at 12 Ill. Reg. 9905, effective May 27, 1988; amended in R82-7 at 12 Ill. Reg. 10712, effective June 9, 1988; amended in R85-29 at 12 Ill. Reg. 12064, effective July 12,

1988; amended in R87-22 at 12 Ill. Reg. 13966, effective August 23, 1988; amended in R86-3 at 12 Ill. Reg. 20126, effective November 16, 1988; amended in R84-20 at 13 Ill. Reg. 851, effective January 9, 1989; amended in R85-11 at 13 Ill. Reg. 2060, effective February 6, 1989; amended in R88-1 at 13 Ill. Reg. 5976, effective April 18, 1989; amended in R86-17B at 13 Ill. Reg. 7754, effective May 4, 1989; amended in R88-22 at 13 Ill. Reg. 8880, effective May 26, 1989; amended in R87-6 at 14 Ill. Reg. 6777, effective April 24, 1990; amended in R87-36 at 14 Ill. Reg. 9437, effective May 31, 1990; added at 14 Ill. Reg. 11979, effective July 9, 1990; amended in R84-44 at 14 Ill. Reg. 20719, effective December 11, 1990; amended in R86-14 at 15 Ill. Reg. 241, effective December 18, 1990; amended in R87-33 at 18 Ill. Reg. 11574, effective July 7, 1994; amended in R94-1 at _____ Ill. Reg. _____, effective _____

Section 304.122 Total Ammonia Nitrogen (as N: STORET number 00610)

- a) No effluent from any source which discharges to the Illinois River, the Des Plaines River downstream of its confluence with the Chicago River System or the Calumet River System, and whose untreated waste load is 50,000 or more population equivalents shall contain more than 2.5 mg/l of total ammonia nitrogen as N during the months of April through October, or 4 mg/l at other times.
- b) Sources discharging to any of the above waters and whose untreated waste load cannot be commuted on a population equivalent basis comparable to that used for municipal waste treatment plants and whose total ammonia nitrogen as N discharge exceeds 45.4 kg/day (100 pounds per day) shall not discharge an effluent of more than 3.0 mg/l of total ammonia nitrogen as N.
- c) In addition to the effluent standards set forth in subsections (a) and (b) above, all sources are subject to Section 304.105 unless the Agency determines as part of the NPDES Permit Program under 35 Ill. Adm. Code 309, Subpart A that alternate effluent standards are applicable pursuant to subsection (d) of this section.
- d) All discharges to effluent modified waters as defined at 35 Ill. Adm. Code 302.213, except for treatment works qualifying under Section 304.120(c), must demonstrate to the Agency that their effluent will not exceed monthly averages of 1.5 mg/l total ammonia as N during the months of April through October, or 4.0 mg/l total ammonia as N at other times. The Agency shall apply the following restrictions in a NPDES Permit:
 - 1) Dischargers achieving lower ammonia concentrations

than given above, yet not meeting the chronic water quality standards of 35 Ill. Adm. Code 302.212(b), shall maintain their existing level of performance consistent with the facility's expected organic and hydraulic loadings for the duration of their NPDES permit.

- 2) New or expanded discharges that increase ammonia loading to general use waters and/or create effluent modified waters or portions of waters must demonstrate compliance to the Agency with the nondegradation requirements at 35 Ill. Adm. Code 302.105.

(Source: Amended at 18 Ill. Reg. _____, effective _____)

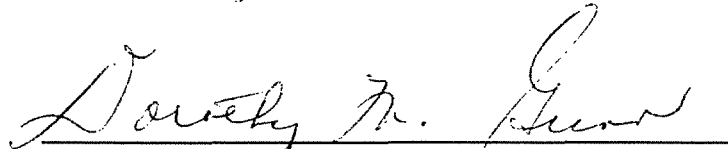
Section 304.301 Exception for Ammonia Nitrogen Water Quality Violations (Repealed)

- ~~a) Section 304.105 shall not apply to 35 Ill. Adm. Code 302.212 for any source during the months of November through March; except that during the months of November through March no source shall discharge an effluent containing a concentration of ammonia nitrogen greater than 4.0 mg/l if the discharge, alone or in combination with other discharges, causes or contributes to a violation of 35 Ill. Adm. Code 302.212.~~
- ~~b) Compliance with the provisions of subsection (a) shall be achieved by March 31, 1979, or such other date as required by NPDES permit, or as ordered by the Board Under Title VIII or Title IX of the Environmental Protection Act.~~
- ~~c) After July 1, 1991, the exemption provided in this Section shall terminate.~~

(Source: Repealed at 18 Ill. Reg. _____, effective _____)

IT IS SO ORDERED.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above opinion order was adopted on the 15th day of September, 1994, by a vote of 6-0.



 Dorothy M. Gunn, Clerk
 Illinois Pollution Control Board