

ILLINOIS POLLUTION CONTROL BOARD
May 19, 1988

IN THE MATTER OF:)
)
AMENDMENTS TO WATER QUALITY AND)
EFFLUENT STANDARDS APPLICABLE TO) R87-27
THE CHICAGO RIVER SYSTEM AND)
CALUMET RIVER SYSTEM)

ADOPTED RULE FINAL ORDER

ORDER OF THE BOARD (by R.C. Flemal):

On March 24, 1988 the Board adopted for second notice certain amendments to water quality and effluent standards applicable to the Chicago and Calumet River Systems, as proposed jointly by The Metropolitan Sanitary District of Greater Chicago and the Illinois Environmental Protection Agency.

On May 10, 1988 the Joint Committee on Administrative Rules ("JCAR") issued a certification of no objection to the proposed amendments. However, JCAR does recommend insertion of reference to Section 304.122 within the first sentence of Section 304.301(b) for the purpose of consistency of this section as well as to provide a parallel with the language of Section 304.301(a). This change does not alter the substance of the amendments, but does increase their clarity; the Board accordingly accepts this change.

Today the Board adopts the amendments as proposed at second notice, with exception of the JCAR recommendation noted above. The full amendments are listed below. The Board also hereby adopts the Second Notice Opinion as the Final Opinion of the Board in this matter.

PART 302

WATER QUALITY STANDARDS

SUBPART D: SECONDARY CONTACT AND
INDIGENOUS AQUATIC LIFE STANDARDS

Section 302.405 Dissolved Oxygen

Dissolved oxygen (STORET number 00300) shall not be less than 3.0 mg/l during at least 16 hours in any 24-hour period, nor less than 2.0 mg/l at any time, and after December 31, 1977 shall not be less than 4.0 mg/l at any time, except that the Calumet-Sag Channel shall not be less than 3.0 mg/l at any time.

Section 302.407 Chemical Constituents

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

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
Ammonia Nitrogen (as N)		
{April October}	00610	2.5
{November March}	00610	4.0
Ammonia, Un-ionized (as N)*	00619	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)	00147	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:

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

$$\underline{x} = \frac{0.09018 + \frac{2729.92}{(T + 273.16)} - \text{pH}}{1}$$

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).**

PART 303

WATER USE DESIGNATIONS AND SITE SPECIFIC
WATER QUALITY STANDARDS

SUBPART C: SPECIFIC USE DESIGNATIONS AND
SITE SPECIFIC WATER QUALITY STANDARDS

Section 303.441 Secondary Contact Waters

The following are designated as secondary contact and indigenous aquatic life waters and must meet the water quality standards of Subpart B, Part 302 35 Ill. Adm. Code 302.Subpart D:

- a) The Chicago Sanitary and Ship Canal;
- b) The Calumet-Sag Channel;
- c) The Little Calumet River from its junction with the Grand Calumet River to the Calumet-Sag Channel;
- d) The Grand Calumet River;
- e) The Calumet River, except the 6.8 mile segment extending from the O'Brien Locks and Dam to Lake Michigan;
- f) Lake Calumet;
- g) The South Branch of the Chicago River;
- h) The North Branch of the Chicago River from its confluence with the North Shore Channel to its confluence with the South Branch;
- i) The Des Plaines River from its confluence with the Chicago Sanitary and Ship Canal to the Interstate 55 bridge; and
- j) The North Shore Channel, except that excluding the segment extending from the North Side Sewage Treatment Works to Lake Michigan. The dissolved oxygen in said Channel shall be not less than 5 mg/l during 16 hours of any 24 hour period, nor less than 4 mg/l at any time.

PART 304

EFFLUENT STANDARDS

SUBPART B: SITE SPECIFIC RULES AND EXCEPTIONS NOT OF GENERAL APPLICABILITY

Section 304.201 Calumet Treatment Plant Cyanide Discharges Wastewater Treatment Plant Discharges of The Metropolitan Sanitary District of Greater Chicago

a) Calumet Treatment Plant Discharges:

The general effluent standards of Section 304.124 as applied to cyanide discharges, Sections 304.120 (b) and (c) and Section 304.122 does do not apply to cyanide discharged from the Calumet Treatment Plant. BOD₅, total suspended solids, cyanide, and ammonia-nitrogen discharged from the Calumet Sewage Treatment Works of The Metropolitan Sanitary District of Greater Chicago. Instead, it must meet the following effluent standard, subject to the averaging rule of Section 304.104(a), effective July 1, 1988:

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
<u>CBOD₅</u>	<u>80082</u>	<u>24</u>
<u>SS</u>	<u>00530</u>	<u>28</u>
<u>Ammonia-Nitrogen (as N)</u>	<u>00610</u>	<u>13</u>
<u>Cyanide</u>	<u>00720</u>	<u>0.15</u>

b) North Side Sewage Treatment Works:

The effluent standards of Sections 304.120(b) and (c) and 304.122 do not apply to BOD₅, total suspended solids, and ammonia-nitrogen discharged from the North Side Sewage Treatment Works of The Metropolitan Sanitary District of Greater Chicago. Instead, it must meet the following standard, subject to the averaging rule of Section 304.104(a) effective July 1, 1988:

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
<u>CBOD₅</u>	<u>80082</u>	<u>12</u>
<u>SS</u>	<u>00530</u>	<u>20</u>
<u>Ammonia-Nitrogen (as N)</u> <u>(April-October)</u>	<u>00610</u>	<u>2.5</u>

November-March)

00610

4.0

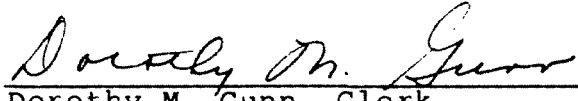
c) Chicago Waterway Evaluation

The Metropolitan Sanitary District of Greater Chicago shall complete and submit to the Board a comprehensive water quality evaluation of the Chicago Waterway System and its influence on the lower Des Plaines and Upper Illinois Rivers by January 15, 1992. Such evaluation shall include assessment of performance levels for North Side, Calumet and Stickney wastewater reclamation plants and the extent of sewer overflow reduction through The Metropolitan Sanitary District of Greater Chicago's Tunnel and Reservoir Plan.

IT IS SO ORDERED.

J. Dumelle and J. Anderson concurred.

I, Dorothy M. Gunn, Clerk of the Illinois Pollution Control Board, hereby certify that the above Opinion and Order was adopted on the 19th day of May, 1988, by a vote of 7-0.



Dorothy M. Gunn, Clerk
Illinois Pollution Control Board