

ILLINOIS POLLUTION CONTROL BOARD
August 20, 1981

IN THE MATTER OF:)
)
AMENDMENTS TO CHAPTER 3:) R76-21
WATER POLLUTION)

PROPOSED RULE. SECOND NOTICE
ORDER OF THE BOARD (by J. D. Dumelle):

On February 19, 1981 the Board adopted a proposed rule, first notice Order in this rulemaking. This was published in the Illinois Register (5 Ill. Reg. no. 11, p. 2629, March 13, 1981). The comment period is over. In response to comments the Board proposes to adopt the language which appears below. Changes from the February 19 Order are indicated by striking out and underlining. The Clerk is directed to initiate the second notice period.

Subpart A: General Effluent Standards

Rule 400 Preamble

This part prescribes the maximum concentrations of various contaminants which may be discharged to the waters of the State. Subpart A prescribes standards of general applicability. Site specific rules and particular exceptions are found in Subpart B.

Rule 401 General Provisions

- a) (Unchanged)
- b) (Unchanged)
- c) Except as otherwise specifically provided, proof of violation of the numerical standards of this Part shall be **determined** on the basis of one or more of the following averaging rules:
 - 1) ~~The average of three or more flow-weighted 24-hour composite samples taken in a calendar month~~ No monthly average shall **not** exceed the prescribed numerical standard.
 - 2) ~~No flow-weighted 24-hour~~ daily composite sample shall exceed two times the prescribed numerical standard.
 - 3) No grab sample, ~~whether taken individually or as an aliquot of a composite sample,~~ shall exceed five times the prescribed numerical standard.

4) ~~If a discharge is pursuant to an NPDES permit which does not contain a definition of "flow-weighted-24-hour-composite sample" for a given parameter for which monitoring is required, then the following rules also apply:~~

~~A) The average of three or more grab samples taken in a single day shall not exceed two times the prescribed numerical standard.~~

~~B) The average of nine or more grab samples taken on three or more days in a calendar month shall not exceed the prescribed numerical standard.~~

d) ~~If samples are averaged over a given period of time, all samples available in that time period shall be included in the average.~~

Terms used in Rule 401(c) shall have the following meanings:

1) The monthly average shall be the numerical average of all daily composites taken during a calendar month. A monthly average must be based on at least three daily composites.

2) A daily composite shall be the numerical average of all grab samples, or the result of analysis of a single sample formed by combining all aliquots, taken during a calendar day. A daily composite must be based on at least three grab samples or three aliquots taken at different times.

3) A grab sample is a sample taken at a single time. Aliquots of a daily composite are grab samples only if they are analyzed separately.

e) Rule 401(c) establishes a method of interpretation of the effluent standards of this Part. The Agency shall consider the averaging rule in deciding whether an applicant has demonstrated that a facility complies with this Part for purposes of permit issuance and in writing the effluent standards into permit conditions. Reporting and monitoring requirements are established by way of permit condition pursuant to Rules 501 and 910(f).

f) Proof of violation of effluent limitations contained in permits shall be based on the language of the permit.

Rule 408 Additional Contaminants

- a) No person shall cause or allow the concentration of the following constituents in any effluent to exceed the following levels, subject to the averaging rules contained in Rule 401(c).

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
Arsenic	01002	0.25
Barium	01007	2.0
Cadmium	01027	0.15
Chromium ¹ (total hexavalent)	01032	0.1
Chromium (total)	01034	1.0
Copper	01042	0.5
Cyanide	00720	0.10
Fluoride	00951	15.0
Iron (total)	01045	2.0
Lead	01051	0.2
Manganese	01055	1.0
Nickel	01067	1.0
Oils ² (hexane soluble or equivalent)	00550	15.00
Phenols	32730	0.3
Silver	01077	0.1
Zinc	01092	1.0
Total Suspended Solids (from sources other than those covered by Rule 404)	00530	15.0

¹Discharges of hexavalent chromium shall be subject to the averaging rule of Rule 401(c) modified as follows: monthly averages shall not exceed 0.1 mg/l; daily composites shall not exceed 0.3 mg/l; and, grab samples shall not exceed 1.0 mg/l.

²Oil may be analytically separated into polar and nonpolar components. If such separation is done, neither of the components may exceed 15 mg/l (i.e. 15 mg/l polar materials and 15 mg/l non-polar materials).

- b) Unless otherwise indicated, concentrations refer to the total amount of the constituent present in all phases, whether solid, suspended or dissolved, elemental or combined, including all oxidation states. Where constituents are commonly measured as other than total, the word "total" is inserted for clarity.
- c) The following table is provided for cross-referencing purposes:

CONSTITUENT	RULE(S)
Ammonia nitrogen	402.1 and 406
Bacteria	405
Biochemical Oxygen Demand	404
Deoxygenating Wastes	404
Mercury	411
Nitrogen, ammonia	402.1 and 406
pH	413
Phosphorus	407

Rule 411 Mercury

- a) Except as provided below, no person shall cause or allow the concentration of mercury in any effluent to exceed the following level, subject to the averaging rule contained in Rule 401(c).

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
Mercury	71900	0.0005

- b) It shall be an exception to paragraph (a) if all of the following conditions are met:

- 1) ~~Mercury-is-not-used-by-the-discharger, or mercury is used and its use cannot be eliminated, and~~

The discharger does not use mercury; or, the discharger uses mercury and this use cannot be eliminated; or, the discharger uses mercury only in chemical analysis or in laboratory or other equipment and takes reasonable care to avoid contamination of wastewater; and,

- 2) The effluent mercury concentration is less than 0.003 mg/l, as determined by application of the averaging rules of Rule

401(c); and

- 3) The discharger is providing the best degree of treatment consistent with technological feasibility, economic reasonableness and sound engineering judgment. This may include no treatment for mercury; and
- 4) The discharger has an inspection and maintenance program likely to reduce or prevent an increase in the level of mercury discharges.

c) It shall be an exception to paragraph (a) if all of the following conditions are met:

- 1) The discharger is a publicly owned or publicly regulated sewage treatment works; and

- 2) ~~Mercury is not used by the discharger; and~~

The discharger does not use mercury; or, the discharger uses mercury only in chemical analysis or in laboratory or other equipment and takes reasonable care to avoid contamination of wastewater; and

- 3) The effluent mercury concentration is less than 0.003 mg/l, as determined by application of the averaging rules of Rule 401(c), at least 70% of the time; provided, however, that daily averages may exceed 0.006 mg/l 30% of the time; and
- 4) The discharger has enforceable ordinances or contract provisions whereby it limits use of mercury by dischargers and discharge of mercury into its sewage system; and
- 5) The discharger's limitations on use and discharge of mercury to its sewage system are at least as stringent as those provided in Rule 702; and
- 6) The discharger has a surveillance program with a reasonable likelihood of determining sources of mercury discharged to the sewage system; and
- 7) The discharger takes all lawful steps to eliminate known mercury discharges to the sewage system which contribute levels in excess of those allowed by Rule 702; and
- 8) The discharger reports all known violations of Rule 702 to the Agency.

d) ~~As used in paragraphs (b) and (c), use of mercury does not include analytical use or use in laboratory or other equipment where reasonable care is taken to avoid contamination of wastewater.~~

- e) d) For purposes of permit issuance the Agency may consider application of the exceptions of this rule to determine compliance with this rule. The Agency may impose permit conditions necessary or required to assure continued application of an exception. When paragraph (b) applies, the Agency may impose an effluent limitation in the permit which allows discharge of a concentration of mercury greater than 0.0005 mg/l but not more than 0.003 mg/l.

Rule 412 New Source Performance Standards

The numerical effluent standards of this Part do not apply under the following circumstances:

- a) The discharge is authorized by an NPDES permit; and
- b) The facility from which the discharge results is subject to new source performance standards promulgated by USEPA pursuant to the Clean Water Act; and
- c) The NPDES permit contains a numerical effluent limitation based upon USEPA effluent guidelines and standards representing best available demonstrated control technology for the constituent in question.

Rule 413 pH

- a) Except as provided below no person shall cause or allow the negative logarithm of the hydrogen ion concentration (pH) in any effluent to be more or less respectively than the maximum and minimum values for pH range indicated in the following table:

CONSTITUENT	STORET NUMBER	RANGE
pH	00400	6-9

- b) The pH limitation is not subject to the averaging rule contained in Rule 401(c).
- c) Effluents which are monitored so as to provide a permanent, continuous pH record may be outside of the listed range for ~~not-more-than~~ a total of not more than fifteen minutes in any day provided the excursion is accidental and less than one pH unit above or below the listed range.

- d) ~~pH-limitation-does-not-apply-if-the-excursion-is-attributable entirely-to-natural-causes-~~

The pH 9 maximum limitation may be exceeded if the elevated pH level:

- 1) is caused entirely by algae in treatment lagoons, in which case there is no upper pH limit; or
 - 2) is caused by the addition of alkali in the wastewater treatment process to cause precipitation of barium, cadmium, chromium, copper, lead, manganese, zinc or other materials requiring such elevated pH for treatment, in which case the upper limit shall be pH 10 and subsection (c) shall not apply to the upper limit.
- e) The burden of proving that paragraph (c) or (d) applies is upon the discharger.

Subpart B: Site Specific Effluent Standards and Exceptions

Rule 450 Calumet Treatment Plant Cyanide Discharges

The general effluent standard of Rule 408 does not apply to cyanide discharged from the Calumet Treatment Plant of the Metropolitan Sanitary District of Greater Chicago. Instead it must meet the following effluent standard, subject to the averaging rule of Rule 401(c):

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
Cyanide	00720	0.15

Rule 451 Chlor-alkali Mercury Discharges in St. Clair County

The mercury discharge standards of Rules 411 and 702(a) shall not apply to any manufacturing facility which operates chlor-alkali cells, is located in St. Clair County and discharges directly, or indirectly into the Mississippi River; or to any publicly owned treatment works which receives such a manufacturing facility's wastewater. The amount of mercury discharged by any such manufacturing facility shall not exceed an average of 114 g/day (0.25 pounds per day) during any calendar month and a maximum of 227 g (0.5 pounds) during any one day. Any publicly owned treatment works which, directly or indirectly, receives such a manufacturing facility's wastewater shall be entitled to discharge mercury in

excess of the levels provided in Rule 408(a) to the extent that said discharge exceeds those levels because of such a manufacturing facility's discharge.

(filed October 23, 1978,

effective November 2, 1978)

Rule 702 Mercury Discharges to Sewers

- a) Except as provided below, no person shall cause or allow the concentration of mercury in any discharge to a publicly owned or publicly regulated sewer system to exceed the following level, subject to the averaging rule contained in Rule 401(c):

CONSTITUENT	STORET NUMBER	CONCENTRATION (mg/l)
Mercury	71900	0.0005

- b) It shall be an exception to paragraph (a) if all the following conditions are met:

- 1) ~~Mercury is not used by the discharger, or mercury is used and its use cannot be eliminated, and~~

The discharger does not use mercury; or, the discharger uses mercury and this use cannot be eliminated; or, the discharger uses mercury only in chemical analysis or in laboratory or other equipment and takes reasonable care to avoid contamination of wastewater; and,

- 2) The discharge mercury concentration is less than 0.003 mg/l, as determined by application of the averaging rules of Rule 401(c); and
- 3) The discharger is providing the best degree of treatment consistent with technological feasibility, economic reasonableness and sound engineering judgment. This may include no treatment for mercury; and
- 4) The discharger has an inspection and maintenance program likely to reduce or to prevent an increase in the level of mercury discharges.

- c) The discharge of wastes from medicinal or therapeutic use of mercury, exclusive of laboratory use, shall be exempt from the limitation of paragraph (a) of this Section if all the following conditions are met:

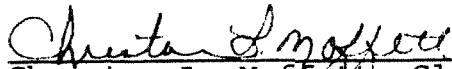
- 1) The total plant discharge is less than 227 g (one half pound) as Hg in any year;
 - 2) The discharge is to a public sewer system; and
 - 3) The discharge does not, alone or in conjunction with other sources, cause the effluent from the sewer system or treatment plant to exceed 0.0005 mg/l mercury.
- d) ~~No-discharge-of-mercury-shall-be-permitted~~ No person shall cause or allow any discharge of mercury to a publicly owned or publicly regulated sewer system which, alone or in combination with other sources, causes a violation by the sewer treatment plant discharge of the water quality standard of ~~0.0005 mg/l-of-Hg-mercury~~ Part II for mercury applicable in the receiving stream.
- e) For purposes of permit issuance the Agency may consider application of the exception of paragraph (b) to determine compliance with this rule. The Agency may impose permit conditions necessary or required to assure continued application of the exception. When Rule 702(b) applies, the Agency may impose an effluent limitation in the permit which allows discharge of a concentration of mercury greater than 0.0005 mg/l but not more than 0.003 mg/l.

Rule 976 918 TDS Reporting and Monitoring

The Agency shall by permit condition require monitoring and reporting of levels of total dissolved solids in all effluents unless it finds that such reporting and monitoring is not required to accomplish the purposes of the Act. Monitoring of total dissolved solids levels shall be by any reasonably reliable method.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Order was adopted on the 30th day of August, 1981 by a vote of 5-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board