

ILLINOIS POLLUTION CONTROL BOARD
May 1, 2008

IN THE MATTER OF:)
)
TRIENNIAL REVIEW OF SULFATE AND) R07-9
TOTAL DISSOLVED SOLIDS WATER) (Rulemaking - Water)
QUALITY STANDARDS:)
PROPOSED AMENDMENTS TO 35 ILL.)
ADM. CODE 302.102(b)(6), 302.102(b)(8),)
302.102(b)(10), 302.208(g), 309.103(c)(3),)
405.109(b)(2)(A), 405.109(b)(2)(B),)
406.100(d); REPEALER OF 35 ILL. ADM.)
CODE 406.203, 406.209, and PART 407; and)
PROPOSED NEW 35 ILL. ADM. CODE)
302.208(h))

Proposed Rule. Proposed Second Notice.

OPINION AND ORDER OF THE BOARD (by G.T. Girard):

The Illinois Environmental Protection Agency (IEPA) proposed rules to update existing general use water quality standards for sulfate and total dissolved solids (TDS) by amending or repealing certain sections and parts of 35 Ill. Adm. Code Parts 302, 309, 405, 406, and 407 of the Board's water and mine-related pollution rules. On September 20, 2007, the Board proposed for first notice the rule as proposed by IEPA with certain specific changes. Those changes included the addition of language reflecting current IEPA practice to the rules on mixing zones and the amendment of mixing zone regulations to allow mixing in certain small streams when adequate dilution is not available.

Today the Board proposes a proposed second-notice opinion and order. The Board is proceeding to *proposed* second notice because the Board is amending the first-notice rule language and is requesting comments on the Board's proposed second-notice changes. The Board will accept comments that are filed by June 2, 2008 regarding the Board's proposed second-notice changes before proceeding to second notice.

The Board will briefly describe the procedural background and then summarize the first-notice rule language and comments the Board received regarding the first-notice rule. Finally, the Board will discuss the areas of concern raised in first-notice comments and the Board's reasons for proceeding to proposed second notice.

PROCEDURAL BACKGROUND

History

On October 23, 2006, IEPA filed a proposal under the general rulemaking provisions of Section 27 of the Environmental Protection Act (Act) (415 ILCS 5/27 (2006)). The proposal included a 15-page Statement of Reasons (Reasons) and a bound 3-inch thick collection of supporting facts and exhibits. On November 16, 2006, the Board accepted the rulemaking for hearing.

On November 27, 2006, in accordance with Section 27(b) of the Act (415 ILCS 5/27(b) (2006)), the Board requested that the Department of Commerce and Economic Opportunity (DCEO) conduct an economic impact study for this rulemaking. To date, the Board has not received a response from DCEO.

The Board held two hearings in this proceeding before Hearing Officer Marie Tipsord. The first hearing was held on March 7, 2007, in Springfield and the second on April 23, 2007, in Chicago. At those hearings, the Board heard testimony from:

Robert Mosher, Brian Koch and Toby Frevert on behalf of IEPA;
James Huff and Brigitte Postel on behalf of CITGO Petroleum Corporation (CITGO);
Glynnis Collins on behalf of Prairie Rivers Network, Sierra Club and the Environmental Law and Policy Center (collectively Environmental Groups);
Phil Gonet and Jim Boswell on behalf of the Illinois Coal Association (ICA).

At the close of hearings, a June 7, 2007 deadline for public comments to be filed was set. The Board received a total of eight public comments¹ from the following:

IEPA (PC 2, PC 4);
ICA (PC 1, PC 3);
Illinois Association of Wastewater Agencies Water Quality Subcommittee (IAWA) (PC 5);
CITGO (PC 6)
Illinois Environmental Regulatory Group (IERG) (PC 7); and
Environmental Groups (PC 8).

On September 20, 2007, the Board adopted the rule for first notice. The proposed rule was published in the *Illinois Register* on October 5, 2007 (31 Ill. Reg. 13624 (Oct. 5, 2007)). On October 11, 2007, by hearing officer order, the Board extended the deadline for filing first-notice public comments to December 3, 2007. The Board has received the following public comments (as well as a Motion and a Response to Motion, as described in the following subsection) since the rule was adopted for first notice:

IERG (PC 9); and
IEPA (PC 10, PC 11).

IERG's Motion to File Reply and IEPA's Response to IERG's Motion

¹ Public comments are cited as "PC _ at _."

IERG filed its PC 9 comments with the Board on December 3, 2007. On December 28, 2007, IEPA filed PC 11: “Illinois Environmental Protection Agency’s Response to Illinois Environmental Regulatory Group’s [PC 9] Comments”. Both of these comments are mentioned here to provide background for IERG’s subsequent Motion and IEPA’s Response to IERG’s Motion, and are detailed in the Summary of First-Notice Comments section below.

On February 26, 2008, IERG filed a “Motion for Leave to Reply to Illinois EPA’s [PC 11] Response to IERG’s Comments” (Motion). IERG’s “Reply to Illinois EPA’s [PC 11] Response to IERG’s Comments” (Reply) was attached as Exhibit A. IERG’s Motion contended that neither IEPA nor any other interested parties would be materially prejudiced if the Board allowed IERG to file a brief Reply to IEPA’s “Response to IERG’s Comments, because the Board had not yet issued a second-notice opinion and order. Motion at 1.

On March 14, 2008, IEPA filed a “Response to IERG’s Motion for Leave to Reply” (Response to Motion). IEPA contended that “[b]oth [IEPA] and stakeholders would be materially prejudiced if the Board grants IERG’s request” to file additional comments. Response to Motion at 2. IEPA stated that granting IERG’s request would delay final promulgation and adoption of the proposed rule by effectively extending the public comment period. *Id.* at 3. IEPA requested that the Board deny IERG’s Motion because IERG had prior opportunities to provide comments and because IERG had repeatedly “provided the same comment regarding economical impact of the proposed rule” without expanding on why IEPA’s discussion of the proposed rule’s economic impact was insufficient. *Id.* IEPA asserted that “neither IERG’s Motion nor IERG’s [R]eply provides additional information that was not already part of the Board record” and that IERG has never “expanded on why [IEPA]’s discussion regarding the economic impact of the proposed rule is not sufficient[.]” *Id.*

Today the Board grants IERG’s Motion. The Board finds that granting the Motion will not unduly delay the rulemaking and that any prejudice that might result is cured by the Board’s decision to proceed with a proposed second notice today. Therefore, the Board accepts IERG’s Reply as PC 12. IERG’s PC 12 is also detailed in the Summary of First-Notice Comments section below.

SUMMARY OF THE RULE AT FIRST NOTICE

IEPA’s proposed rule set forth a sulfate standard for general use waters that varied from 500 milligrams per liter (mg/L) to 2,500 mg/L, depending on the associated chloride and hardness levels measured in the water. The sulfate standard in waters used for livestock watering had a maximum level of 2,000 mg/L. The proposal eliminated the total dissolved solids (TDS) water quality standard for general use waters. The proposal also amended the mixing zone regulations to allow for mixing in 7Q1.1 zero flow streams², and in streams with less than a 3:1 dilution ratio. Finally, the proposal deleted the provisions addressing separate sulfate and chloride water quality standards for discharges from mining operations. Discharges from mining operations would be subject to the general use water quality standards under the proposed regulations. The Board requested additional comment on several of the provisions proposed for

² Streams that have zero flow for at least seven consecutive days recurring on average in nine years out of ten.

first notice, particularly regarding the economic reasonableness of the proposal to delete a special sulfate water quality standard for coal mines.

SUMMARY OF FIRST-NOTICE COMMENTS

The Board received a total of four public comments after first notice in this proceeding. The following paragraphs will summarize the comments beginning with public comment number nine and proceeding in order.

IERG PC 9

IERG's PC 9 responded to the Board's first-notice request for additional comments on economic reasonableness. IERG commented that Section 27(a) of the Act, 415 ILCS 5/27(a) (2006), "clearly places the burden on Illinois EPA, as the proponent of the rulemaking, to provide a full economic impact analysis to the Board." PC 9 at 2-3. IERG conceded that IEPA had "adequately developed the record to support [IEPA's] position that the economics of livestock operations would not be adversely affected by a 2,000 milligrams per liter sulfate standard." *Id.* at 3. However, IERG opined that IEPA "did not apply the same degree of diligence in considering the economic impact for industrial dischargers." *Id.* at 4.

IERG's comment stated that "[n]o similar economic impact analysis had been conducted to determine the impact of the Illinois EPA's proposal to establish a range of sulfate concentrations from 500 mg/L in soft waters with low chloride levels to over 2,500 mg/L in hard waters of average chloride concentrations for industrial dischargers." PC 9 at 4. IERG contends that IEPA "fail[ed] to cite any literature review or expert consultation supporting the economic reasonableness for this range of sulfate limits" for industrial dischargers, including mining operations. *Id.*

IERG disputed IEPA's contention that the proposed rule would decrease petitions for regulatory relief from the sulfate standard. IERG opined that any cost savings from the elimination of "a small number of petitions for regulatory relief . . . would likely be offset by costs incurred by affected sources' inability to comply with the proposed sulfate limits, as is the case with coal mine operations." PC 9 at 5. According to IERG, IEPA explained neither the nature nor the cost of additional controls that existing mines may require to meet general water quality standard-based permit limits. *Id.*

IERG concluded by asserting that IEPA "has not provided any economic analysis to support its claim that the proposed rule does not, in fact, negatively impact coal mine related activities." PC 9 at 6. IERG suggested that IEPA did not meet its "statutory obligation, as the proponent of the proposal, to provide an economic analysis of the impact of the rule" because IEPA "merely provided three paragraphs in its Statement of Reasons to justify the economic reasonableness of the proposed rule" instead of including an IEPA "Agency Analysis of Economic and Budgetary Effects of Proposed Rule." *Id.* at 6-7.

IEPA PC 10

IEPA commented on two aspects of the Board's proposed first-notice rule: water quality standards for sulfate (Section 302.203(h)(3)(C)), and mixing zones (Section 302.102(b)(8)). PC 10.

Section 302.203(h)(3)(C)

IEPA explained that the Board's proposed first-notice rule had added subsection (C) to Section 302.203(h)(3) of IEPA's proposed rule; the Board's proposed subsection (C) language provided that the sulfate standard would be "determined on a case-by-case basis in conjunction with an NPDES [National Pollutant Discharge Elimination System] permitting process" for chloride and hardness ranges not specified in IEPA's proposed rule. PC 10 at 2-3. IEPA noted that Board's proposed language in Section 302.203(h)(3)(C) had been added in response to the concerns of the Environmental Groups, *id.* at 2, and that the language effectively specified "a sulfate standard for all conditions of chloride concentrations, including those exceeding the water quality standard of 500 mg/L," *id.* at 3. IEPA stated that IEPA had consulted the United States Environmental Protection Agency's Region 5 (USEPA) regarding the Board's proposed language, and that "the USEPA concluded that the proposed Section 302.203(h)(3)(C) is 'not consistent with the Clean Water Act (CWA) and Federal regulations . . . [because the proposed language] effectively changes the Federally approved water quality criterion for chlorides without [US]EPA review and approval.'" *Id.*, quoting Attachment I (USEPA letter).

IEPA requested that "the Board delete the language proposed in Section 302.203(h)(3)(C)" because IEPA "agree[d] with USEPA's rationale that a sulfate criterion determined for a waterbody in which chloride concentration[s] are above the general use standard of 500 mg/L must either show that the calculated sulfate standard is protective of the designated general use, or that the designated use is not an attainable use consistent with 40 CFR 131.10(g)." PC 10 at 3-4.

IEPA stated that IEPA had "never seen the practical need for a provision under paragraph C [IEPA] is not aware of an instance where a permit limit for sulfate was necessary and the in-stream chloride concentration was greater than 500 mg/L." PC 10 at 4. According to IEPA, "waters with chloride concentrations above 500 mg/L are relatively rare" and occur primarily "in urban watersheds where streets are salted for traffic safety" during the winter. *Id.* IEPA opined that "instead of calculating a sulfate criterion for a waterbody in which chloride concentrations are above the general use standard of 500 mg/L, the protective approach is to bring the waterbody back into compliance with the chloride water standard." *Id.* Specifically, IEPA's monitoring programs identify waterbodies impaired by high chloride concentrations, which "are listed in the biennial 303(d) report." *Id.* Listing of impaired waters in the 303(d) report "starts the TMDL [total maximum daily load] process, the goal of which is to find the sources causing the problem" in order to "allocate the chloride loadings such that the waterbody is brought back into the compliance with the water quality standard." *Id.* According to IEPA, "[t]he correct response is to rectify the condition." *Id.* at 5. PC 10 Attachment I was a letter dated November 29, 2007 from USEPA's Region 5 Chief of the Water Quality Branch. USEPA letter. The letter stated that "Illinois' approved water quality standards specify that the concentration of chlorides in general use waters must be equal to or less than 500 mg/L in order to protect the uses of general use waters." *Id.*

Section 302.102(b)(8)

IEPA noted that the Board's proposed first-notice rule had amended Section 302.102(b)(8) "to provide that in a stream where the dilution ratio is less than 3:1, the volume used for mixing purposes must not be more than 50% of the stream flow", except in "streams that have a zero flow for at least seven consecutive days occurring on average in nine years out of ten." PC 10 at 5. IEPA stated that the Board amended this section in response to the Environmental Groups' "request to codify a practice by [IEPA] in drafting NPDES permits." *Id.* However, IEPA stated that sometimes more than 50% of the stream flow is used for mixing, but that IEPA decides whether to allow that volume of mixing on a case-by-case basis. *Id.* IEPA noted that "the Board's proposed language does not allow the use [of] more than 50% of the stream flow in any case[.]" despite IEPA's assertion that "[n]either [IEPA], nor any stakeholder testified that the designated uses are not fully protected when more than 50% of the stream flow is used for mixing purposes." *Id.*

IEPA "contended that restricting the use of stream flow above 50% is arbitrary and unnecessary" and that IEPA would address the Environmental Groups' concern by determining the adequate zone of passage pursuant to Section 302.102(b)(6) on a case-by-case basis. PC 10 at 6. IEPA noted that under the Act, IEPA "always has the obligation to ensure that the designated uses are fully protected." *Id.* at 5.

IEPA concluded by recommending that no modification be made to the existing Section 302.102(b)(8) language because the amended language proposed in the Board's first notice would "likely result in unnecessary compliance issues, even though there may not be environmental issues at stake." PC 10 at 6. According to IEPA, any changes to the Board rules should be based on the relevant scientific information and a well-developed record; "if the Board believes that this is a deficiency that needs to be addressed, then [IEPA] recommends that the Board either address this issue in another rulemaking or split the docket for further consideration on this issue." *Id.*

IEPA PC 11

IEPA addressed IERG's concerns regarding the economic reasonableness of the proposed regulations in PC 11. Specifically, IEPA discussed best management practices, the impact of the proposed rulemaking on coal mines, and site-specific rulemakings. PC 11.

IEPA noted that best management practices (BMPs), as required by 35 Ill. Adm. Code 406.204-406.208 of the Board's regulations, are the "ongoing and routine control measures" that IEPA had referred to in IEPA's regulatory proposal. PC 11 at 2-3 (citing Reasons at 13). Existing industrial dischargers such as mining operations may require the application of BMPs to meet water quality standards and applicable permit limits. *Id.* at 3. IEPA responded to IERG's comments by explaining that "[f]or most dischargers, the new sulfate and total dissolved solids standards will allow attainment of water quality standards without the implementation of additional management practices or process alternatives." *Id.* (citing Reasons at 13). According to IEPA, "only a small number of existing mines . . . would need to employ additional controls

such as best management practices” to meet the proposed sulfate water quality standard, because a majority of point sources could meet the proposed standard either (1) without making any process change, or (2) by employing industry-based BMPs and other routine control measures. *Id.* IEPA maintains that “in most cases, if not all cases, mines have already applied some level of BMPs” because BMPs are a requirement under the Board’s existing regulations. *Id.*

According to IEPA, “the net impact of the proposed rulemaking is the proposed rulemaking is that it relaxes the existing standards of sulfate and TDS for point sources [M]ines cannot be said to be in increased jeopardy because of the water quality standards portion of the rulemaking.” PC 11 at 4. IEPA explained that contrary to IERG’s assertion, IEPA “has neither stated nor implied that all coal mines would have trouble in complying with the proposed standard or would be adversely affected by the proposed changes.” *Id.* IEPA clarified that although most mine discharges cannot meet “*existing* sulfate and chloride (hence total dissolved solids (‘TDS’)) standards[,]” IEPA “has yet to find a situation where the sulfate limit based on the *proposed* standard cannot be met by the mine.” *Id.* (emphasis added). IEPA asserted that “it makes little sense to argue that mine dischargers that were struggling to meet the strict existing sulfate standard would incur additional costs to comply with a less stringent standard.” *Id.*

IEPA noted that the proposed rulemaking will reduce the number of mine dischargers that would need to seek site-specific rulemakings to meet the existing standards. PC 11 at 4. IEPA states that IEPA was justified to conclude that the proposed rule would reduce petitions for site-specific water quality standards for TDS and sulfate (thereby saving costs for dischargers, IEPA, and the Board) because IEPA identified seven dischargers that would no longer require site-specific rulemakings under the proposed rule. *Id.* at 4-5. IEPA concluded by indicating that IERG “does not cite to any specific evidence to support [IERG’s] statements of economic hardship” and that IEPA’s reasoning was based on extensive experience dealing with sulfate concentrations in streams and in discharge effluents. *Id.* at 5.

IERG PC 12

IERG noted that IERG’s first-notice comments (PC 9) addressed IEPA’s “obligation pursuant to Section 27 of the Illinois Environmental Protection Act, 415 ILCS 5/27, to provide an economic analysis to the Board in order for the Board to fully take into consideration the economic impact of Illinois EPA’s proposal.” PC 12 at 2. According to IERG, IEPA’s PC 11 Response to IERG’s Comments “did not address [IEPA’s] obligation to provide an analysis of the economic impact of the proposed rule for the Board’s consideration” and IEPA “still appears neither to have addressed the deficiency of its proposal in this respect nor provided any explanation for not doing so.” *Id.*

DISCUSSION

The Board will discuss the three areas of concern raised in first-notice comments: (1) the economic reasonableness of the proposed sulfate standards on mining operations; (2) the applicable sulfate standards for general use waters where chloride levels are above 500 mg/L and hardness levels are 500 mg/L or lower; and (3) the Board’s proposed language regarding mixing

zones in streams where the dilution ratio is less than 3:1. The Board will also discuss the reasons for proceeding to a proposed second notice.

Economic Reasonableness of Proposed Sulfate Standards on Mining Operations

The Board agrees with IERG that Section 27 of the Act obligates IEPA to provide an economic analysis to the Board. PC 12 at 2. Specifically, the Act requires a person filing a proposed rule with the Board to “describe, to the extent reasonably practicable, the universe of affected sources and facilities and the economic impact of the proposed rule.” 415 ILCS 5/27(a) (2006). The Board finds that IEPA has described affected sources by identifying “19 active coal mines in Illinois at the present time[.]” PC 2 at 2, and that IEPA has described the economic reasonableness of the proposed sulfate standards. Specifically, IEPA analyzed point sources (including mining operations) within three categories, PC 11 at 3, concluding that only a small number of existing mines would need to employ additional controls such as best management practices. The Board agrees with IEPA that mining operations are already required to utilize best management practices (Good Mining Practices and other controls) under 35 Ill. Adm. Code 406.204-406.208 of the Board’s regulations. Additionally, IEPA’s Statement of Reasons stated that for most dischargers, the new sulfate standards “will allow attainment of water quality standards without the implementation of additional management practices or process alternatives[.]” and that a “significant majority of discharges would meet the applicable permit limits with the help of ongoing and routine control measures.” Reasons at 13.

Regarding the few mines that would need additional controls to comply with the proposed sulfate standards, the Board believes that the proposed rules will have a smaller economic impact than compliance with existing sulfate and TDS standards.

The Illinois Coal Association (ICA) submitted as Hearing Exhibit 2 a technical report, dated May 1, 2004 through April 30, 2005, on the economic impact for coal mines. No other group has provided specific cost estimates. ICA’s report estimated that the total annualized cost (capital and operating) for all coal mines in Illinois for compliance with a 2000 mg/L sulfate standard would be \$730 million over a ten-year period. Exhibit 2 at 11. For compliance with a 500 mg/L standard, the report estimated a total annualized cost of \$7.5 billion over a ten-year period. *Id.*

The Board carefully reviewed ICA’s report and the rest of the record, and found that the record supported proceeding to first notice with the proposed sulfate standard as amended by the Board. The Board concluded that ICA’s economic analysis was based on an assumption that additional treatment would be required for coal mines to achieve compliance, but that the Board’s proposed changes to mixing provisions would allow mixing as a means of compliance, thus significantly reducing the proposed rules’ economic impact upon industrial dischargers and coal mines. *See Triennial Review of Sulfate and Total Dissolved Solids Water Quality Standards: Proposed Amendments to 35 Ill. Adm. Code 302.102(b)(6), 302.102(b)(8), 302.102(b)(10), 302.208(g), 309.103(c)(3), 405.109(b)(2)(A), 405.109(b)(2)(B), 406.100(d); Repealer of 35 Ill. Adm. Code 406.203 and Part 407; and Proposed New 35 Ill. Adm. Code 302.206(h) (Triennial Review), R07-9, slip op. at 30-31 (Sept. 20, 2007) (first notice).*

The Board notes that, in accordance with Section 27(b) of the Act (415 ILCS 5/27(b) (2006)), the Board conducted a public hearing on the economic impact of the proposed rules and notified the public at least 20 days before the hearing. 415 ILCS 5/27(b)(2) (2006). The Board requested that the Department of Commerce and Economic Opportunity conduct a study of the economic impact of the proposed rules. *Id.* at (b)(1).

No additional hearings were requested, and no participant besides the ICA has submitted any additional economic data regarding the economic reasonableness of the proposed sulfate standard. The Board agrees with IEPA that “IERG has not expanded on why [IEPA]’s discussion regarding the economic impact of the proposed rule is not sufficient[.]” Response to Motion at 3. The Board also agrees that IERG “does not cite to any specific evidence to support its statements of economic hardship.” *Id.* at 5. The Board has again carefully reviewed the record and considered all evidence in the record regarding the economic reasonableness of the proposed sulfate standards on mining operations. The Board finds that the record supports proceeding to proposed second notice with the sulfate standards as proposed by IEPA.

General Use Water Quality Standards for Sulfate Where Chlorides are Above 500 mg/L and Hardness is Less than or Equal to 500 mg/L

As previously detailed, IEPA’s PC 10 urged the Board to delete the Board’s proposed language in Section 302.208(h)(3)(C). The Board’s proposed first-notice language indicated that the sulfate standard for waters where chloride concentrations are above 500 mg/L and hardness is 500 mg/L or lower would be “determined on a case-by-case-basis in conjunction with an applicable NPDES permitting process.” Triennial Review, R07-9, slip op. at 25 (Sept. 20, 2007) (first notice). IEPA disagreed with the Board’s proposed language, and PC 10 included a letter from USEPA Region 5’s Chief of the Water Quality Branch, indicating that USEPA also disagreed with the language proposed by the Board.

The Board has considered IEPA’s comment regarding the proposed language. The Board’s intention was not to somehow intimate that violation of the chloride water quality standard was acceptable. Rather the Board was attempting to codify the specific procedure IEPA would follow when chlorides exceed 500 mg/L and hardness is less than or equal to 500 mg/L. As the Environmental Groups indicated, IEPA’s proposal “d[id] not include a provision for determining a sulfate standard when chlorides are above 500 mg/L and hardness is less than or equal to 500 mg/L.” Triennial Review, R07-9, slip op. at 24 (Sept. 20, 2007) (first notice). Additionally, CITGO stated that it was unclear which sulfate standard IEPA would apply during periods of elevated chlorides on general use waterways. *Id.* CITGO noted that it had identified chloride levels above 500 mg/L at its intake along the secondary contact waters of the Chicago Sanitary and Ship Canal, and opined that general use waters may also periodically experience similarly elevated chloride levels. *Id.*

At public hearing regarding IEPA’s proposal, IEPA indicated an intent to address waterways with chloride concentrations greater than 500 mg/L on a case-by-case basis, perhaps through permitting. Triennial Review, R07-9, slip op. at 24 (Sept. 20, 2007) (first-notice). The Board responded to the Environmental Groups’ concern about the need for “an equation, numeric standard, or procedure to establish sulfate standards for the entire range of chloride and

hardness.” *Id.* The Board added its proposed rule language to Section 302.208(h)(3)(C) because the Board found that a sulfate standard protective of aquatic life should be applied, even if the chloride standard exceeds the general use water quality standards. *Id.* at 25.

The Board’s proposed first-notice rule language codified IEPA’s intent to address through permitting sulfate levels where chlorides exceed 500 mg/L and hardness is 500 mg/L or lower. Triennial Review, R07-9, slip op. at 25 (Sept. 20, 2007) (first-notice). At first notice, the Board noted that IEPA is bound by rules prohibiting degradation of the waters and water quality standards when issuing NPDES permits, and therefore proposed rule language based on the Board’s conclusion that IEPA could “utilize the equations and/or other rule provisions to insure the quality of the water through the permit process.” *Id.* However, the Board has reviewed and considered IEPA’s PC 10 and the attached USEPA letter regarding the Board’s proposed Section 302.208(h)(3)(C). USEPA noted that sulfate criterion must be approved by USEPA to be effective, and that sulfate limits for discharges into waters where chloride levels exceed 500 mg/L should be determined in accordance with the site-specific procedures outlined within the USEPA letter. PC 10.

The Board today amends Section 302.208(h)(3)(C) to establish a standard for sulfate where chlorides exceed 500 mg/L and hardness is at or below 500 mg/L, according to Section 303(c) of the Clean Water Act and federal regulations at 40 C.F.R. 131.10(j)(2). Specifically, an action to derive a sulfate criterion where ambient chloride levels exceed 500 mg/L requires IEPA to submit to USEPA a “site-specific chloride criterion demonstrating that a chloride concentration greater than 500 mg/L will protect the designated general use, or a use attainability analysis showing that the designated general use is not [] attainable [] for the affected surface water based on one or more of the six factors identified in the Federal regulations at 40 C.F.R. 131.10(g).” PC 10, Attachment I (USEPA letter).

The Board proposes to delete the Board’s proposed first-notice language for Section 302.208(h)(3)(C). The Board proposes that Section 302.208(h)(3)(C) should state that:

If the combination of hardness and chloride concentrations of existing waters are not reflected above, the sulfate standard may be determined in a site-specific rulemaking pursuant to Section 303(c) of the Federal Water Pollution Control Act of 1972 (Clean Water Act), 33 USC 1313, and Federal Regulations at 40 C.F.R. 131.10(j)(2).

The Board invites public comment on this proposed language.

**The Board’s Proposed Language Regarding Mixing Zones in Streams
Where the Dilution Ratio is Less Than 3:1**

The Board’s first-notice proposed language for Section 302.102(b)(8) did not permit mixing in more than 50% of a stream’s volume in any stream with a dilution ratio of less than 3:1. The Board had added this language in response to the Environmental Groups’ requests for a zone of passage for aquatic life. IEPA suggested that IEPA be permitted to maintain flexibility

for addressing other relevant water quality factors by determining an “adequate zone of passage pursuant to Section 302.[102](b)(6) on a case-by-case-basis.” PC 10 at 6.

The Board proposed language at first notice to codify a policy followed by IEPA. The Board appreciates IEPA’s desire to maintain flexibility. However, the Board believes that the rule should codify IEPA’s intent to perform case-by-case evaluations for mixing. The Board therefore amends the proposed language to allow mixing zones in more than 50% of a stream’s volume where an adequate zone of passage is provided consistent with Section 302.102(b)(6).

The Board proposes to delete the Board’s proposed first notice language for Section 302.102(b)(8). The Board proposes that Section 302.102(b)(8) should state that:

The area and volume in which mixing occurs, alone or in combination with other areas and volumes of mixing must not contain more than 25% of the cross-sectional area or volume of flow of a stream except for those streams where the dilution ratio is less than 3:1. In streams where the dilution ratio is less than 3:1, the volume in which mixing occurs, alone or in combination with other volumes of mixing must provide for an adequate zone of passage pursuant to Section 302.102(b)(6).

The Board invites public comment on this proposed language.

Proceeding to Proposed Second Notice for Public Comments

The Board proceeded to first notice on September 20, 2007, to ensure the timely adoption of the proposed rules. Today the Board proceeds to proposed second notice to provide time for public comments regarding the Board’s changes to the sulfate water quality standards and mixing zone provisions since the adoption of the first-notice regulations.

The Board finds that based on the record before the Board, the rules are economically reasonable and technically feasible. In addition, the Board finds that the proposed second-notice rules will be protective of the environment and human health. The Board therefore finds that proceeding to proposed second notice is warranted. However, because of the nature of the amendments to the first-notice rule language, the Board seeks public comment on the changes proposed today. Accordingly, the Board will accept comments filed by June 2, 2008. After that date, the Board will proceed to second notice.

CONCLUSION

The Board finds that the record supports proceeding to proposed second notice with IEPA’s proposal as amended by the Board. The Board agrees with IEPA that the record contains sufficient analysis of the economic reasonableness of the proposed sulfate standards on mining operations. The Board amends the language regarding proposed water quality standards for sulfate where chloride levels exceed 500 mg/L and hardness levels are 500 mg/L or lower in consideration of IEPA’s PC 10, to ensure that chloride levels continue to be regulated according to the federal Clean Water Act. The Board amends the proposed language regarding mixing

zones in streams where the dilution ratio is less than 3:1 to reflect that IEPA may use more than 50% of stream flow for mixing as long as an adequate zone of passage is provided. Public comments on the proposed second-notice rules are due by June 2, 2008.

ORDER

The Board adopts the proposed amendments set forth below for proposed second notice to allow for public comment on proposed changes to the rule language.

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	Antidegradation

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
302.209	Fecal Coliform
302.210	Other Toxic Substances
302.211	Temperature
302.212	Total Ammonia Nitrogen
302.213	Effluent Modified Waters (Ammonia)(Repealed)

SUBPART C: PUBLIC AND FOOD PROCESSING WATER SUPPLY STANDARDS

Section

302.301	Scope and Applicability
302.302	Algicide Permits
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AUTHORITY: Implementing Section 13 and authorized by Sections 11(b) and 27 of the Environmental Protection Act [415 ILCS 5/13, 11(b), and 27]

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; amended at 6 Ill. Reg. 11161, effective September 7, 1982; amended at 6 Ill. Reg. 13750, effective October 26, 1982; amended at 8 Ill. Reg. 1629, effective January 18, 1984; peremptory amendments at 10 Ill. Reg. 461, effective December 23, 1985; amended at R87-27 at 12 Ill. Reg. 9911, effective May 27, 1988; amended at 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; amended in R88-21(B) at 14 Ill. Reg. 11974, effective July 9, 1990; amended in R94-1(A) at 20 Ill. Reg. 7682, effective May 24, 1996; amended in R94-1(B) at 21 Ill. Reg. 370, effective December 23, 1996; expedited correction at 21 Ill. Reg. 6273, effective December 23, 1996; amended in R97-25 at 22 Ill. Reg. 1356, effective December 24, 1997; amended in R99-8 at 23 Ill. Reg. 11249, effective August 26, 1999; amended in R01-13 at 26 Ill. Reg. 3505, effective February 22, 2002; amended in R02-19 at 26 Ill. Reg. 16931, effective November 8, 2002; amended in R02-11 at 27 Ill. Reg. 166, effective December 20, 2002; amended in R04-21 at 30 Ill. Reg. 4919, effective March 1, 2006; amended in R04-25 at 32 Ill. Reg. 2254, effective January 28, 2008; amended in R07-9 at 32 Ill. Reg. _____, effective _____.

SUBPART A: GENERAL WATER QUALITY PROVISIONS

Section 302.102 Allowed Mixing, Mixing Zones and ZIDs

- a) Whenever a water quality standard is more restrictive than its corresponding effluent standard, or where there is no corresponding effluent standard specified at 35 Ill. Adm. Code 304, an opportunity shall be allowed for compliance with 35 Ill. Adm. Code 304.105 by mixture of an effluent with its receiving waters, provided the discharger has made every effort to comply with the requirements of 35 Ill. Adm. Code 304.102.
- b) The portion, volume and area of any receiving waters within which mixing is allowed pursuant to subsection (a) shall be limited by the following:
 - 1) Mixing must be confined in an area or volume of the receiving water no larger than the area or volume which would result after incorporation of outfall design measures to attain optimal mixing efficiency of effluent and receiving waters. Such measures may include, but are not limited to, use of diffusers and engineered location and configuration of discharge points.
 - 2) Mixing is not allowed in waters which include a tributary stream entrance if such mixing occludes the tributary mouth or otherwise restricts the movement of aquatic life into or out of the tributary.
 - 3) Mixing is not allowed in water adjacent to bathing beaches, bank fishing areas, boat ramps or dockages or any other public access area.
 - 4) Mixing is not allowed in waters containing mussel beds, endangered species habitat, fish spawning areas, areas of important aquatic life habitat, or any other natural features vital to the well being of aquatic life in such a manner that the maintenance of aquatic life in the body of water as a whole would be adversely affected.
 - 5) Mixing is not allowed in waters which contain intake structures of public or food processing water supplies, points of withdrawal of water for irrigation, or watering areas accessed by wild or domestic animals.
 - 6) Mixing must allow for a zone of passage for aquatic life in which water quality standards are met. However, a zone of passage is not required in receiving streams that have zero flow for at least seven consecutive days recurring on average in nine years out of ten.
 - 7) The area and volume in which mixing occurs, alone or in combination with other areas and volumes of mixing, must not intersect any area of any body of water in such a manner that the maintenance of aquatic life in the body of water as a whole would be adversely affected.

- 8) The area and volume in which mixing occurs, alone or in combination with other areas and volumes of mixing must not contain more than 25% of the cross-sectional area or volume of flow of a stream except for those streams where the dilution ratio is less than 3:1. In streams where the dilution ratio is less than 3:1, the volume in which mixing occurs, alone or in combination with other volumes of mixing must provide for an adequate zone of passage pursuant to Section 302.102(b)(6). ~~Mixing is not allowed in receiving waters which have a zero minimum seven day low flow which occurs once in ten years.~~
 - 9) No mixing is allowed where the water quality standard for the constituent in question is already violated in the receiving water.
 - 10) No body of water may be used totally for mixing of single outfall or combination of outfalls, except as provided in Section 302.102(b)(6).
 - 11) Single sources of effluents which have more than one outfall shall be limited to a total area and volume of mixing no larger than that allowable if a single outfall were used.
 - 12) The area and volume in which mixing occurs must be as small as is practicable under the limitations prescribed in this subsection, and in no circumstances may the mixing encompass a surface area larger than 26 acres.
- c) All water quality standards of this Part must be met at every point outside of the area and volume of the receiving water within which mixing is allowed. The acute toxicity standards of Sections 302.208 and 302.210 must be met within the area and volume within which mixing is allowed, except as provided in subsection (e).
 - d) Pursuant to the procedures of Section 39 of the Act and 35 Ill. Adm. Code 309, a person may apply to the Agency to include as a condition in an NPDES permit formal definition of the area and volume of the waters of the State within which mixing is allowed for the NPDES discharge in question. Such formally defined area and volume of allowed mixing shall constitute a "mixing zone" for the purposes of 35 Ill. Adm. Code: Subtitle C. Upon proof by the applicant that a proposed mixing zone conforms with the requirements of Section 39 of the Act, this Section and any additional limitations as may be imposed by the Clean Water Act (CWA) (33 USC ~~U.S.C.~~ 1251 et seq.), the Act or Board regulations, the Agency shall, pursuant to Section 39(b) of the Act, include within the NPDES permit a condition defining the mixing zone.
 - e) Pursuant to the procedures of Section 39 of the Act and 35 Ill. Adm. Code 309, a person may apply to the Agency to include as a condition in an NPDES permit a ZID as a component portion of a mixing zone. Such ZID shall, at a minimum, be

limited to waters within which effluent dispersion is immediate and rapid. For the purposes of this subsection, "immediate" dispersion means an effluent's merging with receiving waters without delay in time after its discharge and within close proximity of the end of the discharge pipe, so as to minimize the length of exposure time of aquatic life to undiluted effluent, and "rapid" dispersion means an effluent's merging with receiving waters so as to minimize the length of exposure time of aquatic life to undiluted effluent. Upon proof by the applicant that a proposed ZID conforms with the requirements of Section 39 of the Act and this Section, the Agency shall, pursuant to Section 39(b) of the Act, include within the NPDES permit a condition defining the ZID.

- f) Pursuant to Section 39 of the Act and 35 Ill. Adm. Code 309.103, an applicant for an NPDES permit shall submit data to allow the Agency to determine that the nature of any mixing zone or mixing zone in combination with a ZID conforms with the requirements of Section 39 of the Act and of this Section. A permittee may appeal Agency determinations concerning a mixing zone or ZID pursuant to the procedures of Section 40 of the Act and 35 Ill. Adm. Code 309.181.
- g) Where a mixing zone is defined in an NPDES permit, the waters within that mixing zone, for the duration of that NPDES permit, shall constitute the sole waters within which mixing is allowed for the permitted discharge. It shall not be a defense in any action brought pursuant to 35 Ill. Adm. Code 304.105 that the area and volume of waters within which mixing may be allowed pursuant to subsection (b) is less restrictive than the area or volume of waters encompassed in the mixing zone.
- h) Where a mixing zone is explicitly denied in a NPDES permit, no waters may be used for mixing by the discharge to which the NPDES permit applies, all other provisions of this Section notwithstanding.
- i) Where an NPDES permit is silent on the matter of a mixing zone, or where no NPDES permit is in effect, the burden of proof shall be on the discharger to demonstrate compliance with this Section in any action brought pursuant to 35 Ill. Adm. Code 304.105.

(Source: Amended at 32 Ill. Reg. _____, effective _____)

SUBPART B: GENERAL USE WATER QUALITY STANDARDS

Section 302.208 Numeric Standards for Chemical Constituents

- a) The acute standard (AS) for the chemical constituents listed in subsection (e) shall not be exceeded at any time except as provided in subsection (d).
- b) The chronic standard (CS) for the chemical constituents listed in subsection (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 (d). The samples used to demonstrate attainment or lack of attainment with a CS must be collected in a manner that assures an average representative of the sampling period. For the metals that have water quality based standards dependent upon hardness, the chronic water quality standard will be calculated according to subsection (e) using the hardness of the water body at the time the metals sample was collected. To calculate attainment status of chronic metals standards, the concentration of the metal in each sample is divided by the calculated water quality standard for the sample to determine a quotient. The water quality standard is attained if the mean of the sample quotients is less than or equal to one for the duration of the averaging 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 flow pursuant to Section 302.658 nor shall an annual average, based on at least eight samples, collected in a manner representative of the sampling period, exceed the HHS except as provided in subsection (d).
- d) 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 zone of initial dilutions (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.
- e) Numeric Water Quality Standards for the Protection of Aquatic Organisms

Constituent	STORET Number	AS (µg/L)	CS (µg/L)
Arsenic (trivalent, dissolved)	22680	$360 \times 1.0^* = 360$	$190 \times 1.0^* = 190$
Cadmium (dissolved)	01025	$\exp \left\{ e^{A+B \ln(H)} \times \left[\frac{1.138672 - [(\ln H)(0.041838)]}{[(\ln H)(0.041838)]} \right] \right\}^*$	$\exp \left\{ e^{A+B \ln(H)} \times \left[\frac{1.101672 - [(\ln H)(0.041838)]}{[(\ln H)(0.041838)]} \right] \right\}^*$

		where $A = -2.198$ and $B = 1.128$	where $A = -3.490$ and $B = 0.7852$
Chromium (hexavalent, total)	01032	16	11
Chromium (trivalent, dissolved)	80357	\exp $e^{A+B\ln(H)} \times 0.316^*$,	\exp $e^{A+B\ln(H)} \times 0.860^*$,
		where $A = 3.688$ and $B = 0.8190$	where $A = 1.561$ and $B = 0.8190$
Copper (dissolved)	01040	\exp $e^{A+B\ln(H)} \times 0.960^*$,	\exp $e^{A+B\ln(H)} \times 0.960^*$,
		where $A = -1.464$ and $B = 0.9422$	where $A = -1.465$ and $B = 0.8545$
Cyanide	00718	22	5.2
Lead (dissolved)	01049	\exp $e^{A+B\ln(H)} \times \left\{ \frac{1.46203 -}{[(\ln H)(0.145712)]} \right\}^*$,	\exp $e^{A+B\ln(H)} \times \left\{ \frac{1.46203 -}{[(\ln H)(0.145712)]} \right\}^*$,
		where $A = -1.301$ and $B = 0.1.273$	where $A = -2.863$ and $B = 1.273$
Mercury (dissolved)	71890	$2.6 \times 0.85^* = 2.2$	$1.3 \times 0.85^* = 1.1$
Nickel (dissolved)	01065	\exp $e^{A+B\ln(H)} \times 0.998^*$,	\exp $e^{A+B\ln(H)} \times 0.997^*$,
		where $A = 0.5173$ and $B = 0.8460$	where $A = -2.286$ and $B = 0.8460$

TRC	500600	19	11
Zinc (dissolved)	01090	exp $e^{A+B\ln(H)} \times 0.978^*$, where $A = 0.9035$ and $B = 0.8473$	exp $e^{A+B\ln(H)} \times 0.986^*$, where $A = -0.8165$ and $B = 0.8473$
Benzene	78124	4200	860
Ethyl- benzene	78113	150	14
Toluene	78131	2000	600
Xylene(s)	81551	920	360

where: $\mu\text{g/L}$ = microgram per liter;
 \exp^{x} = base of natural logarithms raised to the x- power;
 $\ln(H)$ = natural logarithm of Hardness (STORET 00900), and
 $*$ = conversion factor multiplier for dissolved metals

f) Numeric Water Quality Standard for the Protection of Human Health

Constituent	STORET Number	($\mu\text{g/L}$)
Mercury	71900	0.012
Benzene	78124	310

where: $\mu\text{g/L}$ = micrograms per liter

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

Constituent	Unit	STORET Number	Standard
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
Phenols	mg/L	32730	0.1
Selenium (total)	mg/L	01147	1.0
Silver (total)	µg/L	01077	5.0
Sulfate	mg/L	00945	-500
Total Dissolved Solids	mg/L	70300	1000

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

h) The following concentrations for sulfate must not be exceeded except in receiving waters for which mixing is allowed pursuant to Section 302.102:

- 1) At any point where water is withdrawn or accessed for purposes of livestock watering, the average of sulfate concentrations must not exceed 2,000 mg/L when measured at a representative frequency over a 30 day period.
- 2) The results of the following equations provide sulfate water quality standards in mg/L for the specified ranges of hardness (in mg/L as CaCO₃) and chloride (in mg/L) and must be met at all times:

A) If the hardness concentration of receiving waters is greater than or equal to 100 mg/L but less than or equal to 500 mg/L, and if the chloride concentration of waters is greater than or equal to 25 mg/L but less than or equal to 500 mg/L, then:

$$C = [1276.7 + 5.508 (\text{hardness}) - 1.457 (\text{chloride})] * 0.65$$

where, C = sulfate concentration

B) If the hardness concentration of waters is greater than or equal to 100 mg/L but less than or equal to 500 mg/L, and if the chloride concentration of waters is greater than or equal to 5 mg/L but less than 25 mg/L, then:

$$C = [-57.478 + 5.79 (\text{hardness}) + 54.163 (\text{chloride})] * 0.65$$

where C = sulfate concentration

- 3) The following sulfate standards must be met at all times when hardness (in mg/L as CaCO₃) and chloride (in mg/L) concentrations other than specified in (h)(2) are present:
- A) If the hardness concentration of waters is less than 100 mg/L or chloride concentration of waters is less than 5 mg/L, the sulfate standard is 500 mg/L.
 - B) If the hardness concentration of waters is greater than 500 mg/L and the chloride concentration of waters is 5 mg/L or greater, the sulfate standard is 2,000 mg/L.
 - C) If the combination of hardness and chloride concentrations of existing waters are not reflected above, the sulfate standard may be determined in a site-specific rulemaking pursuant to Section 303(c) of the Federal Water Pollution Control Act of 1972 (Clean Water Act), 33 USC 1313, and Federal Regulations at 40 C.F.R. 131.10(j)(2).

(Source: Amended at 32 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE C: WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 309
PERMITS

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309.APPENDIX A References to Previous Rules

AUTHORITY: Implementing Sections 13 and 13.3 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/13, 13.3 and 27].

SOURCE: Adopted in R71-14, at 4 PCB 3, March 7, 1972; amended in R73-11, 12, at 14 PCB 661, December 5, 1974, at 16 PCB 511, April 24, 1975, and at 28 PCB 509, December 20, 1977; amended in R73-11, 12, at 29 PCB 477, at 2 Ill. Reg. 16, p. 20, effective April 20, 1978; amended in R79-13, at 39 PCB 263, at 4 Ill. Reg. 34, p. 159, effective August 7, 1980; amended in R77-12B, at 41 PCB 369, at 5 Ill. Reg. 6384, effective May 28, 1981; amended in R76-21, at 44 PCB 203, at 6 Ill. Reg. 563, effective December 24, 1981; codified at 6 Ill. Reg. 7818; amended in R82-5, 10, at 54 PCB 411, at 8 Ill. Reg. 1612, effective January 18, 1984; amended in R86-44 at 12 Ill. Reg. 2495, effective January 13, 1988; amended in R88-1 at 13 Ill. Reg. 5993, effective April 18, 1989; amended in R88-21(A) at 14 Ill. Reg. 2892, effective February 13, 1990; amended in R91-5 at 16 Ill. Reg. 7339, effective April 27, 1992; amended in R95-22 at 20 Ill. Reg. 5526, effective April 1, 1996; amended in R99-8 at 23 Ill. Reg. 11287, effective August 26, 1999; amended in R02-11 at 27 Ill. Reg. 202, effective December 20, 2002; amended in R03-19 at 28 Ill. Reg. 7310, effective May 7, 2004; amended in R07-9 at 32 Ill. Reg. _____, effective _____.

SUBPART A: NPDES PERMITS

Section 309.103 Application - General

a) Application Forms

- 1) An applicant for a National Pollution Discharge Elimination System (NPDES) Permit shall file an application, in accordance with Section 309.223 ~~hereof~~, on forms provided by the Illinois Environmental Protection Agency (Agency). Such forms shall comprise the NPDES application forms promulgated by the U.S. Environmental Protection Agency for the type of discharge for which an NPDES Permit is being sought and such additional information as the Agency may reasonably

require in order to determine that the discharge or proposed discharge will be in compliance with applicable state and federal requirements.

- 2) In addition to the above application forms, the Agency may require the submission of plans and specifications for treatment works and summaries of design criteria.
- 3) Effluent toxicity monitoring
 - A) In addition to the above application forms, the Agency may require, pursuant to Section 39 of the Act, the installation, use, maintenance and reporting of results from monitoring equipment and methods, including biological monitoring. The Agency may require, pursuant to Section 39 of the Act, effluent toxicity testing to show compliance with 35 Ill. Adm. Code 302.621 and 302.630. If this toxicity testing shows the effluent to be toxic, the Agency may require pursuant to Section 39 of the Act further testing and identification of the toxigants ~~toxicant(s)~~ pursuant to 35 Ill. Adm. Code 302.210(a).
 - B) The following POTWs shall provide the results of valid whole effluent biological toxicity testing to the Agency:
 - i) All POTWs with design influent flows equal to or greater than one million gallons per day;
 - ii) All POTWs with approved pretreatment programs or POTWs required to develop a pretreatment program pursuant to 35 Ill. Adm. Code 310.Subpart E;
 - C) In addition to the POTWs listed in subsection (a)(3)(B), the Agency may require other POTWs to submit the result of toxicity tests with their permit applications, based on consideration of the following factors.
 - i) The variability of the pollutants or pollutant parameters in the POTW effluent (based on chemical-specific information, the type of treatment facility, and types of industrial contributors);
 - ii) The dilution of the effluent in the receiving water (ratio of effluent flow to receiving stream flow);
 - iii) Existing controls on point or nonpoint sources, including total maximum daily load calculations for the waterbody segment and the relative contribution of the POTW;

- iv) Receiving stream characteristics, including possible or known water quality impairment, and whether the POTW discharges to a coastal water, one of the Great Lakes, or a water designated as an outstanding natural resource; or
 - v) Other considerations (including but not limited to the history of toxic impact and compliance problems at the POTW), which the Agency determines could cause or contribute to adverse water quality impacts.
- D) The POTWs required under subsection ~~subsections~~ (a)(3)(B) or (a)(3)(C) to conduct toxicity testing shall use the methods prescribed at 35 Ill. Adm. Code 302.Subpart F. Such testing must have been conducted since the later of the last NPDES permit reissuance or permit modification pursuant to Section 309.182, 309.183 or 309.184 for any of the reasons listed at 40 CFR 122.62(a) (1994), as amended at 60 Fed. Reg. 33926 effective June 29, 1995, herein incorporated by reference (including no later amendments or editions).
- 4) All POTWs with approved pretreatment programs shall provide the following information to the Agency: a written technical evaluation of the need to revise local limits pursuant to 35 Ill. Adm. Code 310.210.

BOARD NOTE: Subsections (a)(3)(B) through (a)(4) are derived from 40 CFR 122.21(j) (1994).

b) Animal Waste Facilities

An applicant for an NPDES Permit in connection with the operation of an animal waste facility shall complete, sign, and submit an NPDES application in accordance with the provisions of 35 Ill. Adm. Code: Subtitle E, Chapter I.

c) Mining Activities

- 1) If, as defined by 35 Ill. Adm. Code 402.101, mining activities are to be carried out on a facility for which an NPDES Permit is held or required, the applicant must submit a permit application as required by 35 Ill. Adm. Code 403.103, 403.104 and 405.104. If the facility will have a discharge other than a mine discharge or non-point source mine discharge as defined by 35 Ill. Adm. Code 402.101, the applicant shall also submit an NPDES Permit application in accordance with Section 309.223 on forms supplied by the Agency.

- 2) As provided by 35 Ill. Adm. Code 403.101, except to the extent contradicted in 35 Ill. Adm. Code: Subtitle D, Chapter I, the rules contained in this Subpart apply only to 35 Ill. Adm. Code: Subtitle D, Chapter I NPDES Permits.
- 3) As provided by 35 Ill. Adm. Code 406.100, except to the extent provided in 35 Ill. Adm. Code: Subtitle D, Chapter I, the effluent ~~and water quality~~ standards of 35 Ill. Adm. Code ~~302, 303 and~~ 304 are inapplicable to mine discharges and non-point source mine discharges.

d) New Discharges

Any person whose discharge will begin after the effective date of this Subpart A or any person having an NPDES Permit issued by the U.S. Environmental Protection Agency for an existing discharge which will substantially change in nature, or increase in volume or frequency, must apply for an NPDES Permit either:

- 1) No later than 180 days in advance of the date on which such NPDES Permit will be required; or
- 2) In sufficient time prior to the anticipated commencement of the discharge to insure compliance with the requirements of Section 306 of the Clean Water Act (CWA) (33 ~~USC U.S.C.~~ 1251 et seq), or with any other applicable water quality standards and applicable effluent standards and limitations.

e) Signatures

An application submitted by a corporation shall be signed by a principal executive officer of at least the level of vice president, or his duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge described in the application form originates. In the case of a partnership or a sole proprietorship, the application shall be signed by a general partner or the proprietor, respectively. In the case of a publicly owned facility, the application shall be signed by either the principal executive officer, ranking elected official, or other duly authorized employee.

(Source: Amended at 32 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
SUBTITLE D: MINE RELATED WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

STATE AND NPDES PERMITS

Section	
405.100	Preamble
405.101	Special Conditions: Agency Guidance Document
405.102	Standard for Permit Issuance or Certification
405.103	Permit Modification When New Regulations are Adopted
405.104	Permit Applications
405.105	Surface Drainage Control
405.106	Refuse Disposal
405.107	Experimental Permits for Refuse Disposal
405.108	Permit for Use of Acid-producing Mine Refuse
405.109	Abandonment Plan
405.110	Cessation, Suspension or Abandonment
405.111	Emergency Procedures To Control Pollution
405.112	Mine Entrances
405.113	Permit Area
405.APPENDIX A	References to Previous Rules

AUTHORITY: Implementing Sections 12 and 13 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/12, 13, and 27 (2006)].

SOURCE: Adopted in R76-20, R77-10, 39 PCB 196, at 4 Ill. Reg. 34, p. 164, effective August 7, 1980; codified at 5 Ill. Reg. 8527; amended in R83-6A at 8 Ill. Reg. 13267, effective July 16, 1984; amended in R07-9 at 32 Ill. Reg. _____, effective _____.

Section 405.109 Abandonment Plan

- a) A state or NPDES permit shall include an abandonment plan as a condition.
- b) An abandonment plan shall be incorporated into the permit by reference if it:
 - 1) Includes a time schedule establishing that the abandonment plan will be executed and completed within a reasonable time after abandonment considering any potential adverse impact on the environment pending completion of the plan and the amount of time required to carry out the steps in the plan; one year is assumed to be a reasonable time unless the operator demonstrates that a longer time is reasonable; and
 - 2) Shows that the mine related facilities and mining activities will be abandoned so as not to cause a violation of the Act or this Chapter;
 - A) ~~If the plan includes a discharge which will remain after abandonment which will not meet the requirements of 35 Ill. Adm. Code 406.202, and if the permit included water quality based conditions under 35 Ill. Adm. Code 406.203 during active~~

~~mining, the discharge shall be deemed to meet 35 Ill. Adm. Code 406.202 with respect to total dissolved solids, chloride, sulfate, iron and manganese if it will meet the requirements of 35 Ill. Adm. Code 406.106 and 406.203(e)(1) and (e)(2); or~~

- ~~B) If the plan includes impoundments which will remain after abandonment and which will not meet the water quality standards of 35 Ill. Adm. Code 302.204 or 302.208, with respect to total dissolved solids, chloride, sulfate, iron, manganese and pH, such fact shall not prevent approval of the plan if the impoundment will meet the requirements of 35 Ill. Adm. Code 406.106 and 406.203(e)(1) and (e)(2).~~
- c) If the abandonment plan does not meet the standard of paragraph subsection (b) the Agency may either deny the permit or issue it with an abandonment plan modified by conditions subject to Section 405.101.
- d) The time limit provided by paragraph subsection (b)(1) is inapplicable to abandonment plans for surface coal mines which are approved as reclamation plans under the Surface Coal Mining Land Conservation and Reclamation Act, [225 ILCS 720] (Ill. Rev. Stat. 1983, ch. 96 1/2, par. 7902.03).
- e) Any abandonment plan constituting a substantial change from the permitted abandonment plan is a revised abandonment plan.
- f) A permittee shall apply for a new or revised or supplemental NPDES or State ~~state~~ permit prior to implementation of a revised abandonment plan within the time limits provided by 35 Ill. Adm. Code 403.104(c).
- ~~g) An abandonment plan incorporated into a permit pursuant to showing under 35 Ill. Adm. Code 406.203 shall include conditions pursuant to 35 Ill. Adm. Code 406.203(e)(1) and (e)(2).~~

(Source: Amended at 32 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
 SUBTITLE D: MINE RELATED WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 406
 MINE WASTE EFFLUENT AND WATER QUALITY STANDARDS

SUBPART A: EFFLUENT STANDARDS

Section

406.100	Preamble
406.101	Averaging
406.102	Sampling, Reporting and Monitoring
406.103	Background Concentrations
406.104	Dilution
406.105	Commingling of Waste Streams
406.106	Effluent Standards for Mine Discharges
406.107	Offensive Discharges
406.108	Non-Point Source Mine Discharges
406.109	Effluent Standards for Coal Mine Discharge from Reclamation Areas
406.110	Alternate Effluent Standards for Coal Mine Discharges During Precipitation Events

SUBPART B: WATER QUALITY STANDARDS

Section	
406.201	Temporary Exemption from Section 406.105 (Repealed)
406.202	Violation of Water Quality Standards
406.203	TDS Related Permit Conditions (<u>Repealed</u>)
406.204	Good Mining Practices
406.205	Contact with Disturbed Areas
406.206	Retention and Control of Exposed Waters
406.207	Control of Discharge Waters
406.208	Unconventional Practices
406.209	Expiration of Former Exemptions (<u>Repealed</u>)
406.APPENDIX A	References to Previous Rules

AUTHORITY: Implementing Sections 12 and 13 and authorized by Section 27 of the Environmental Protection Act [415 ILCS 5/12, 13 and 27].

SOURCE: Adopted in R76-20, R77-10, 39 PCB 196, at 4 Ill. Reg. 34, p. 164, effective August 7, 1980; codified at 5 Ill. Reg. 8527; emergency amendment in R83-6B at 7 Ill. Reg. 8386, effective July 5, 1983, for a maximum of 150 days; amended in R83-6B at 7 Ill. Reg. 14510, effective October 19, 1983; amended in R83-6A at 8 Ill. Reg. 13239, effective July 16, 1984; amended in R84-29 at 11 Ill. Reg. 12899, effective July 27, 1987; amended in R07-9 at 32 Ill. Reg. _____, effective _____.

SUBPART A: EFFLUENT STANDARDS

Section 406.100	Preamble
a)	Part 406 applies to mine discharges and non-point source mine discharges as defined by Section 402.101.
b)	Other discharges, including sanitary sewers, are regulated under Subtitle C, Chapter I: Water Pollution.

- c) A facility which has another discharge will be subject to both Subtitle C and Subtitle D. Subtitle D governs mining activities, including mine discharges and non-point source mine discharges. Subtitle C governs other discharges.
- d) Except to the extent provided in this Part 406, ~~Part Parts 302, 303 and 304 of subtitle C~~ is ~~are~~ inapplicable to mine discharges and non-point source mine discharges.

(Source: Amended at 32 Ill. Reg. _____, effective _____)

SUBPART B: WATER QUALITY STANDARDS

Section 406.203 TDS Related Permit Conditions (Repealed)

- a) ~~This Section sets forth procedures by which water quality based permit conditions for total dissolved solids, chloride, sulfate, iron and manganese may be established by the Agency for coal mine discharges. These procedures apply instead of Section 406.202 whenever a permit applicant elects to proceed under this Section. A permittee must comply with water quality based permit conditions for total dissolved solids, chloride, sulfate, iron and manganese established pursuant to this Section instead of Section 406.202. Public hearings may be required pursuant to 35 Ill. Adm. Code 309.115.~~
- b) ~~An applicant may elect to proceed under this Section by providing the required information as part of a new or renewed or supplemental state or NPDES permit application.~~
- e) ~~The Agency shall establish permit conditions under this Section if all of the following conditions are met:~~
 - 1) ~~The applicant proves to the Agency that the discharge will not cause an adverse effect on the environment in and around the receiving stream, by either:~~
 - A) ~~Demonstrating that the discharge will contain a concentration less than or equal to 3500 mg/l sulfate and 1000 mg/l chloride; or,~~
 - B) ~~Through actual stream studies.~~
 - 2) ~~The applicant proves to the Agency that the discharge will not adversely affect any public water supply; and~~

- 3) ~~The applicant proves to the Agency that it is utilizing good mining practices designed to minimize discharge of total dissolved solids, chloride, sulfate iron and manganese.~~
- d) ~~The Agency may promulgate under 35 Ill. Adm. Code 405.101(c) a code of good mining practices consistent with the definition in Section 406.204. Compliance with the code of good mining practices shall be prima facie evidence that the applicant is utilizing good mining practices within the meaning of paragraph (c)(3).~~
- e) ~~Whenever the Agency issues a permit based on this Section, it shall include such conditions as may be necessary to ensure that:~~
- 1) ~~There is no adverse effect on the environment in and around the receiving stream;~~
 - 2) ~~The discharge does not adversely affect any public water supply; and~~
 - 3) ~~The permittee utilizes good mining practices designed to minimize discharge of total dissolved solids, chloride, sulfate, iron and manganese.~~
- f) ~~Whenever the Agency issues a permit pursuant to this Section, it may include as a condition a requirement that the permittee submit to the Agency effluent data for total dissolved solids, chloride, sulfate, iron and manganese.~~

(Source: Repealed at 32 Ill. Reg. _____, effective _____)

Section 406.209 Expiration of Former Exemptions (Repealed)

- a) ~~Exemptions from the water quality standards granted prior to the effective date of Section 406.203 shall continue until any of the following events occurs:~~
- 1) ~~Any State or NPDES permit for the facility expires, or is revoked, renewed or reissued;~~
 - 2) ~~Any State or NPDES permit for the facility is modified, unless the Agency expressly continues the exemption pending review pursuant to paragraph (b);~~
 - 3) ~~An application period set pursuant to paragraph (b) expires with no application having been received;~~
 - 4) ~~The Agency grants or denies a permit under Section 406.203; or~~
 - 5) ~~January 1, 1987, the final date for continuation of former exemptions.~~

- b) ~~The Agency may require applications for review pursuant to Section 406.203 by notifying individual permittees and setting a date for application not less than 15 months after the date notice is given.~~
- e) ~~If an appeal to the Board is filed, exemptions continue until the Board enters a final order disposing of the appeal.~~

(Source: Repealed at 32 Ill. Reg. _____, effective _____)

TITLE 35: ENVIRONMENTAL PROTECTION
 SUBTITLE D: MINE RELATED WATER POLLUTION
CHAPTER I: POLLUTION CONTROL BOARD

PART 407
 COMPLIANCE AND EFFECTIVE DATES (REPEALED)

Section

- 407.101 Effective Date
- 407.102 Applications from Holders of Outstanding Permits
- 407.103 Expiration of Outstanding Permits
- 407.104 Abandonment Plan for Existing Permits

APPENDIX A References to Previous Rules

AUTHORITY: Authorized by Section 27 and implementing Sections 12 and 13 and authorized by Section 27 of the Illinois Environmental Protection Act (Ill. Rev. Stat., ch. 111 1/2, pars. 1012, 1013 and 1027) unless otherwise noted.

SOURCE: Adopted at 4 Ill. Reg. 34, p. 164, effective August 7, 1980; codified at 5 Ill. Reg. 34, p. 8527, effective August 10, 1981; Repealed in R07-9 at 31 Ill. Reg. _____, effective _____.

Section 407.101 Effective Date

This Chapter is effective upon filing with the Secretary of State.

Section 407.102 Applications from Holders of Outstanding Permits

- a) A holder of an outstanding operating permit under the old Chapter 4 may apply for a state or NPDES permit at any time.
- b) The Agency may by notification require a holder of an outstanding operating permit to apply for a state or NPDES permit.
- c) Notification shall contain a date, not less than 180 days after notification, by which date an application must be received by the Agency.

Section 407.103 Expiration of Outstanding Permits

Compliance with the provisions of this Chapter is required on the effective date except that immediate compliance with the permit requirement of Section 404.101 is not required of holders of outstanding permits for mines opened prior to the effective date of this Subtitle D, Chapter I. For such facilities, compliance with Section 404.101 is required upon expiration of the outstanding operating permit. Such permits shall expire upon the occurrence of any of the following conditions, whichever occurs first:

- a) The lapse of three years after the effective date of this Chapter; or
- b) The expiration of any NPDES permit held by the permittee for the facility; or
- c) Issuance of a permit for the facility pursuant to Section 403.102 or Section 404.101; or
- d) The lapse of an application period fixed pursuant to Section 407.102(c) if an application is not received by the date given in the notification.

Section 407.104 Abandonment Plan for Existing Permits

The requirement of a permit to abandon contained in Rule 502 of old Chapter 4, effective May 23, 1972 shall continue to apply to operators of mines opened prior to the effective date of this Subtitle D, Chapter I, until such time as such operator shall have been issued under this Subtitle D, Chapter I a valid permit containing an abandonment plan.

Section 407.APPENDIX A REFERENCES TO PREVIOUS RULES

The following table is provided to aid in referencing old Board rule numbers to section numbers pursuant to codification.

Chapter 4, Mine Related Pollution Part VII, 35 Ill. Admin. Code Part 407
Compliance and Effective Dates

Rule 701	Section 407.101
Rule 702	Section 407.102
Rule 703	Section 407.103
Rule 704	Section 407.104

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above opinion and order on May 1, 2008, by a vote of 4-0.

A handwritten signature in black ink that reads "John T. Therriault". The signature is written in a cursive style with a long horizontal flourish extending to the right.

John T. Therriault, Assistant Clerk
Illinois Pollution Control Board