

ILLINOIS POLLUTION CONTROL BOARD
December 15, 1983

IN THE MATTER OF:)
)
PROPOSED AMENDMENTS TO TITLE 35,) R83-6 (Docket A)
SUBTITLE D: MINE RELATED WATER)
POLLUTION, CHAPTER I, PARTS)
405 and 406)


PROPOSED RULE. FIRST NOTICE

PROPOSED ORDER OF THE BOARD (by D. Anderson):

The Board proposes to amend 35 Ill. Adm. Code 405 and 406. The text of the proposed amendments for publication in the Illinois Register is attached to this Order. The record will remain open for comment for a period of 45 days after the date of publication in the Illinois Register. The Proposed Order is supported by a Proposed Opinion of this same date.

IT IS SO ORDERED.

I, Christan L. Moffett, Clerk of the Illinois Pollution Control Board, hereby certify that the above Proposed Order was adopted on the 15th day of December, 1983 by a vote of 7-0.



Christan L. Moffett, Clerk
Illinois Pollution Control Board



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TEXT OF PROPOSED AMENDMENTS FOR CODIFICATION

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

PART 405
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

~~Authority-Note~~ AUTHORITY: Implementing Sections 12 and 13 and authorized by Section 27 of the Illinois Environmental Protection Act (Ill. Rev. Stat. ~~1979~~ 1981, ch. 111 1/2, pars. 1012, 1013 and 1027) ~~unless-otherwise-noted.~~

~~Source-Note~~ SOURCE: Adopted in R76-20, R77-10, 39 PCB 196, at 4 Ill. Reg. no. 34, p. 164, effective August 7, 1980; Recodified at 5 Ill. Reg. no. 347-p. 8527; effective August 21, 1981, unless-otherwise-noted; amended in R83-6A at 7 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 one year of abandonment ~~unless-otherwise-approved-by-the-Agency;~~ and

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- 2) Meets the standard of Section 405.102.
- 3) Contains information to establish that any discharge to remain after abandonment will meet the requirements of 35 Ill. Adm. Code 406.106(b) and 406.202, or, if the permit included water quality-based conditions under 35 Ill. Adm. Code 406.203 during active mining, that the discharge meets the requirements of 35 Ill. Adm. Code 406.106(b) and 406.203(c)(1) and (c)(2).
- 4) Contains information to establish that any 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, will meet the requirements of 35 Ill. Adm. Code 406.106(b) and 406.203(c)(1) and (c)(2).
- c) ~~3)~~ If it the abandonment plan does not meet the standard of Section 405.102 the Agency may either deny the permit or issue it with an abandonment plan modified by conditions subject to Section 405.101.
- d) ~~4)~~ The time limit provided by ~~Section 405.109~~ paragraph (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.
- e)e) Any abandonment plan constituting a substantial change from the permitted abandonment plan is a revised abandonment plan.
- d)f) A permittee shall apply for a new or revised or supplemental NPDES or state permit prior to implementation of a revised abandonment plan within the time limits provided by ~~Section~~ 35 Ill. Adm. Code 403.104(c).
- g) An abandonment plan incorporated into a permit pursuant to a showing under 35 Ill. Adm. Code 406.203

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shall include conditions pursuant to 35 Ill. Adm Code 406.203(c)(1) and (e)(2).

(Source: Amended at 8 Ill. Reg. _____, effective _____
_____.)

Section 405.110 Cessation, Suspension or Abandonment

- a) A permittee shall notify the Agency in writing by certified mail within thirty days of any of the following:
 - 1) Abandonment; or
 - 2) Cessation or suspension of active mining for thirty days or more unless caused by a labor dispute.
- b) During cessation or suspension of active mining, whether caused by a labor dispute or not, the permittee shall provide whatever interim impoundment, drainage diversion and wastewater treatment is necessary to avoid violations of the Act or Subtitle B, Chapter 4 this Chapter.
- c) Upon abandonment the permittee shall execute and complete the permitted abandonment plan; provided, however, that the permittee need not execute and complete the permitted abandonment plan if the abandonment arises solely from transfer of ownership to a responsible party.
- d) A responsible party is a person who holds a state or NPDES permit and all other necessary permits for the same facility. If such permit is issued subsequent to the transfer it shall relieve the transferor of the obligation of further executing the abandonment plan.
- e) Upon request by the permittee the Agency shall issue a certificate of abandonment whenever an the permittee demonstrates that:
 - 1) The abandonment plan has been satisfactorily executed; and

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2) The requirements of Sections 405.109(b)(3)
and (b)(4) have been met.

f) Refusal to issue a certificate of abandonment is a
permit denial for purposes of appeal.

(Source: Amended at 8 Ill. Reg. _____, effective _____.)

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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: ~~GENERAL EFFLUENT AND-WATER~~
~~QUALITY STANDARDS~~

Section
406.100 Preamble
406.101 Averaging
406.102 Sampling, Reporting and Monitoring
406.103 Background Concentrations
406.104 Dilution
406.105 ~~Violation-of-Water-Quality-Standards~~ Renumbered
406.106 Effluent Standards
406.107 Offensive Discharges
406.108 Non-point Source Mine Discharges

SUBPART B: ~~SITE-SPECIFIC-EFFLUENT-AND~~ WATER
~~QUALITY STANDARDS;-TEMPORARY-RULES~~

Section
406.201 ~~Temporary-Exemption-from-Section-406-105~~ Repealed
406.202 Violation of Water Quality Standards
406.203 Water Quality-based TDS Permit Conditions
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

AUTHORITY: Implementing Sections 12 and 13 and authorized by Section 27 of the Environmental Protection Act (Ill. Rev. Stat. 1979 1981, ch. 111 1/2, pars. 1012, 1013 and 1027).

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 7 Ill. Reg. _____, effective _____.

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SUBPART A: GENERAL EFFLUENT AND-WATER
QUALITY STANDARDS

Section 406.104 Dilution

- a) Dilution of an effluent from a treatment works or from any wastewater source is not acceptable as a method of treatment of wastes in order to meet the effluent standards set forth in this Subpart. Rather, it shall be the obligation of any person discharging contaminants of any kind to the waters of the State to provide the best degree of treatment of wastewater consistent with technological feasibility, economic reasonableness and sound engineering judgment.
- b) In making determinations as to what kind of treatment is the best degree of treatment within the meaning of this paragraph Section, the following will be considered:
 - 1) What degree of waste reduction can be achieved by process change, improved housekeeping and recovery of individual waste components for reuse; and
 - 2) Whether individual process wastewater streams should be segregated or combined.
- c) If necessary the concentrations so measured shall be recomputed to exclude the effect of any dilution that is improper under this Section.

(Source: Amended at 8 Ill. Reg. _____, effective _____.)

Section 406.105 Violation-of-Water-Quality-Standards
Renumbered

~~In-addition-to-the-other-requirements-of-this-part, no mine discharge or non-point source mine discharge shall, alone or in combination with other sources, cause a violation of any water quality standards of Subtitle C, Chapter I* Water Pollution. When the Agency finds that a discharge which would comply with effluent standards contained in this part would cause or is causing a violation of water quality standards, the Agency shall take appropriate action under~~

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~~Section 31 or 39 of the Act to require the discharge to meet whatever effluent limits are necessary to ensure compliance with the water quality standards. When such a violation is caused by the cumulative effect of more than one source, several sources may be joined in an enforcement or variance proceeding and measures for necessary effluent reductions will be determined on the basis of technical feasibility, economic reasonableness and fairness to all dischargers.~~

~~*Prior to codification, Chapter 34--Water Pollution, Part IV is to be codified Part 304.~~

(Source: Section 406.105 renumbered to Section 406.202 and amended at 8 Ill. Reg. _____, effective _____.)

Section 406.106 Effluent Standards

- a) The effluent limitations contained in Part 35 Ill. Adm. Code 304 of Subtitle C--Water Pollution shall not apply to mine discharges or non-point source mine discharges.*
- b) No person shall cause or allow a mine discharge effluent to exceed the following levels of contaminants:

<u>Constituent</u>	<u>Storet Number</u>	<u>Concentration</u>
Acidity ³	00435	(total acidity shall not exceed total alkalinity)
Iron (total) ³	01045	3.5 mg/l
Lead (total) ³	01051	1 mg/l
Ammonia		
Nitrogen (as N) ^{2,3}	00610	5 mg/l
pH ^{1,7,3}	00400	(range 6 to 9)
Zinc (total) ³	01092	5 mg/l
Fluoride (total) ³	00951	15 mg/l
Total suspended solids ³	00530	35 mg/l
Manganese	01055	2.0 mg/l

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- c) ¹ pH is Not subject to averaging.
- d) ² The ammonia nitrogen standard is Applicable only to an operator utilizing ammonia in wastewater treatment.
- e) ³ Any overflow, increase in volume of a discharge or discharge from a by-pass system caused by precipitation or snowmelt shall not be subject to the limitations of this Section ~~covered-by-this footnote~~. This exemption shall be available only if the facility is designed, constructed and maintained to contain or treat the volume of water which would fall on the areas ~~covered-by-this subpart~~ tributary to the bypass during a 10-year, 24-hour or larger precipitation event (or snowmelt of equivalent volume). The operator shall have the burden of demonstrating that the prerequisites to an exemption set forth in this subsection have been met.
- f) The manganese effluent limitation is applicable only to discharges from facilities where chemical addition is required to meet the iron or pH effluent limitations. The upper limit of pH shall be 10 for any such facility that is unable to comply with the manganese limit at pH 9. This limit is not applicable to mine discharges which are associated with areas where no active mining, processing or refuse disposal has taken place since May 13, 1976.

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SUBPART B: SITE SPECIFIC EFFLUENT AND WATER
QUALITY STANDARDS; TEMPORARY RULES

Section 406.201 ~~Temporary Exemption from Section 406.105~~
Repealed

- a) ~~The Agency may by permit provide that a mine discharge shall be exempt from the requirement of Section 406.105 as it applies to the discharge of total dissolved solids, chloride, sulfate, iron and manganese.~~
- b) ~~A permittee may apply for such exemption as part of a new or renewed or supplemental state or NPDES permit.~~
- e) ~~The Agency shall permit such exemption if all of the following conditions are met:
 - 1) ~~The Agency does not demonstrate significant adverse effect on the environment in and around the receiving water;~~
 - 2) ~~The permittee submits to the Agency adequate proof that the discharge will not adversely affect any public water supply; and~~
 - 3) ~~That the permittee submits to the Agency proof that it is utilizing good mining practices designed to minimize discharge of the parameters to be exempted.~~~~
- d) ~~The Agency may promulgate under 35 Ill. Adm. Code 405.101(e) a code of good mining practices. Compliance with the code of good mining practices shall be prima facie evidence that the permittee is utilizing good mining practices within the meaning of subparagraph (e)(3).~~
- e) ~~Whenever the Agency issues a permit exempting a permittee from Section 406.105, it shall include in the permit such conditions as may be necessary to ensure that the permittee utilizes good mining practices designed to minimize discharge of the parameters exempted.~~

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~~#) After July 1, 1984, the exemption provided in this Section 406.201 shall terminate.~~

(Source: Repealed at 8 Ill. Reg. _____, effective _____.)

Section 406.202 Violation of Water Quality Standards

In addition to the other requirements of this Part, no mine discharge or non-point source mine discharge shall, alone or in combination with other sources, cause a violation of any water quality standards of 35 Ill. Adm. Code 302 or 303. When the Agency finds that a discharge which would comply with effluent standards contained in this Part would cause or is causing a violation of water quality standards, the Agency shall take appropriate action under Section 31 or 39 of the Environmental Protection Act to require the discharge to meet whatever effluent limits are necessary to ensure compliance with the water quality standards. When such a violation is caused by the cumulative effect of more than one source, several sources may be joined in an enforcement or variance proceeding and measures for necessary effluent reductions will be determined on the basis of technical feasibility, economic reasonableness and fairness to all dischargers.

(Source: Renumbered from Section 406.105 and amended at 8 Ill. Reg. _____, effective _____.)

Section 406.203 Water Quality-based TDS Permit Conditions

- a) This Section sets forth procedures by which water quality-based permit conditions for total dissolved solids, chloride and sulfate may be established by the Agency. 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 and sulfate established pursuant to this Section instead of Section 406.202.

- 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.

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- c) The Agency shall establish permit conditions under this Section if all of the following conditions are met and a public hearing is held:
- 1) The applicant submits to the Agency adequate proof 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) If the expected discharge concentration is above these levels, through actual stream studies.
 - 2) The applicant submits to the Agency adequate proof that the discharge will not adversely affect any public water supply; and
 - 3) The applicant submits to the Agency proof that it is utilizing good mining practices designed to minimize discharge of total dissolved solids, chloride and sulfate.
 - 4) The applicant demonstrates that there is no reasonable relationship between the economic and social costs and the benefits obtained from compliance with the water quality standards.
- d) The Agency may promulgate under 35 Ill. Adm. Code 405.101(c) a code of good mining practices. 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;

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- 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 and sulfate.
- 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 and sulfate.

(Source: Added at 8 Ill. Reg. _____, effective _____.)

Section 406.204 Good Mining Practices

In determining whether an operator is utilizing good mining practices designed to minimize discharge of total dissolved solids, chloride and sulfate, the Agency shall consider whether the operator is utilizing the following good mining practices, further defined in the Sections indicated:

- a) Practices which may stop or minimize water from coming into contact with disturbed areas (Section 406.205);
- b) Retention and control within the site of waters exposed to disturbed materials (Section 406.206);
- c) Control and treatment of waters discharged from the site (Section 406.207);
- d) Unconventional practices (Section 406.208).

(Source: Added at 8 Ill. Reg. _____, effective _____.)

Section 406.205 Contact with Disturbed Areas

In considering whether an operator is utilizing practices which may stop or minimize water from coming into contact with disturbed areas, the Agency shall consider the extent to which the operator is utilizing erosion controls, including:

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a) Diversions

- 1) Bypass diversions to collect and convey around or through to a receiving stream waters that would otherwise flow over or through disturbed areas.
- 2) On-site diversions to convey water around or over: disturbed areas; or, undermined areas connected to the surface.
- 3) Interception diversions to isolate on-site critical areas, including, but not limited to: raw spoils, partially stabilized spoils and highway access roads.

b) Runoff Controls

- 1) Staging of clearing, grubbing, scalping, grading and reclamation operations so that the various stages of the mining operation are kept concurrent with extraction operations, and a minimum disturbed surface area is exposed at any one time.
- 2) Keeping gradients and inclines to the active pit as short as possible in order to minimize the amount of drainage going to the active pit.
- 3) Soil stabilization through measures such as revegetation and mulching to reduce the potential for exposing materials which may produce total dissolved solids.
- 4) Sealing of boreholes acting as conduits allowing the uncontrolled entrance of water to underground mines or to active pit areas of surface mines.
- 5) Leaving sufficient barriers whenever mining adjacent to abandoned underground workings that may be inundated with water.
- 6) Disposal of potential contaminant producing materials as soon as possible in areas that

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will prohibit or minimize contact with surface and groundwater.

- 7) Covering or treating potential contaminant producing materials so as to minimize adverse effects on water quality.
- 8) Sealing of water-yielding fracture zones encountered during underground mining to reduce the flow of high total dissolved solids waters when geologic conditions permit successful sealing and when the flow from the fracture zone contributes significantly to the total dissolved solids load in the mine discharge.

(Source: Added at 8 Ill. Reg. _____, effective _____.)

Section 406.206 Retention and Control of Exposed Waters

In considering whether an operator is utilizing practices leading to the retention and control within the site of waters exposed to disturbed materials, the Agency shall consider the extent to which the operator is utilizing:

- a) Erosion Controls: grading, sloping and revegetation of disturbed soil surfaces to reduce and detain runoff.
- b) Sedimentation Controls: appropriate routing and segregation or combination of wastewater and mine runoff water to minimize any effect on receiving stream quality.
- c) Reuse of Discharges: Reuse of water bearing high concentrations of total dissolved solids, whenever possible, including:
 - 1) Recirculation ponds to recycle water to the preparation plant.
 - 2) Recirculation ponds to provide water for underground dust control.

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- 3) Holding ponds to provide irrigation waters to reclaimed land and/or adjacent crop land with tolerances to accept higher concentrations of total dissolved solids.
- d) Minimum Exposure of Waters to Disturbed Materials:
 - 1) Application of water management practices, either continuously or at frequent intervals, in order to minimize water contact with disturbed materials.
 - 2) Prevention of accumulation of waters in active pits, benches, terraces, roads, processing areas, surface depressions and underground mine workings and cavities where the dissolution of contaminants will be facilitated.
 - 3) Removal of water to diversions and appropriate impoundments as soon as possible to minimize additional loadings of total dissolved solids.

(Source: Added at 8 Ill. Reg. _____, effective _____.)

Section 406.207 Control of Discharge Waters

In considering whether an operator is utilizing practices leading to control and treatment of waters discharged from the site containing elevated levels of total dissolved solids, chloride or sulfate, the Agency shall consider the extent to which the operator is utilizing:

- a) Regulation of discharges when other control methods are insufficient and chemical treatment is economically unfeasible, including:
 - 1) Regulating the flow of discharges high in total dissolved solids in accordance with fluctuating or intermittent stream flows so that the concentration of total dissolved solids remains within established water quality standards; or
 - 2) Regulating the flow or fluctuation of receiving streams by timely discharge of water from

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existing impoundments which have suitable discharge control structures.

- b) Rerouting over economically feasible distances, involving collecting discharges and conveying them to more suitable discharge points, such as large holding ponds located adjacent to more suitable receiving streams where dilution and/or water quality is better.

Section 406.208 Unconventional Practices

In considering whether an operator is utilizing unconventional practices to prevent production or discharge of elevated levels of total dissolved solids, chloride and sulfate, the Agency shall consider the extent to which the operator is utilizing:

- a) Diversion of groundwater by intercepting the flow path prior to entering a surface or underground mine when it is determined by the mine operator to be economically preferable to treating contaminated water after it passes through a mine.
- b) Dewatering practices that remove clean formation water before contacting toxic and total dissolved solids producing materials, including several theoretical techniques which can be employed to tap nonpolluted aquifers in order to reduce the amount of water entering a mine.
- c) Any additional practices which the operator demonstrates to be effective in reducing levels of total dissolved solids, chloride and sulfate in discharges.

(Source: Added at 8 Ill. Reg. _____, effective _____.)

Section 406.209 Expiration of Former Exemptions

- 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:

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- 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;
- 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.
 - c) If an appeal to the Board is filed, exemptions continue until the Board enters a final order disposing of the appeal.

(Source: Added at 8 Ill. Reg. _____, effective _____.)