

# Regulatory Analysis Form

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**(1) Agency**

Department of Environmental Protection

2008 OCT -3 PM 12:34

PA DEPARTMENT OF ENVIRONMENTAL PROTECTION

**(2) I.D. Number (Governor's Office Use)**

7-375

IRRC Number: 2243

**(3) Short Title**

Water Quality Standards Implementation – Chloride and Sulfate

**(4) PA Code Cite**

25 PA Code, Chapter 96

**(5) Agency Contacts & Telephone Numbers**

Primary Contact: Sharon F. Trostle 783 -1303

Secondary Contact: Edward R. Brezina, 787-9637

**(6) Type of Rulemaking (Check One)**

- Proposed Rulemaking  
 Final Order Adopting Regulation  
 Final Order, Proposed Rulemaking Omitted

**(7) Is a 120-Day Emergency Certification Attached?**

- No  
 Yes: By the Attorney General  
 Yes: By the Governor

**(8) Briefly explain the regulation in clear and nontechnical language.**

The regulatory amendment to Chapter 96 moves the point of application of the water quality criteria for chloride and sulfate from all points instream after mixing to the point of all existing or planned surface potable water supply withdrawals. The regulation fully protects the uses of the surface waters of the Commonwealth, and eliminates a costly requirement on dischargers to provide advanced treatment technologies in most instances when a potable water supply is not affected by the discharge. This regulation is in accordance with Governor Ridge's Executive Order 1996-1, which provides in part that regulations not be more stringent than necessary to protect the resources of the Commonwealth unless there is a compelling Pennsylvania interest.

**(9) State the statutory authority for the regulation and any relevant state or federal court decisions.**

The Pennsylvania Clean Streams Law, Act of June 22, 1937 (P.L. 1987, No. 394) as amended, 35 P.S. § 691.1 et seq.

Section 1920-A of The Administrative Code of 1929, as amended, 71 P.S. § 510-20.

## Regulatory Analysis Form

(10) Is the regulation mandated by any federal or state law or court order, or federal regulation? If yes, cite the specific law, case or regulation, and any deadlines for action.

No.

(11) Explain the compelling public interest that justifies the regulation. What is the problem it addresses?

This regulation changes implementation of the criteria for sulfate and chloride in response to the finding that use of the criteria under the previous regulation imposes unnecessary technology and cost burdens on industries and other wastewater facilities that discharge these substances. Under the amended regulation, the uses of the waters, in particular, the potable water supply use, will be protected and the requirement to use advanced technologies will be reduced to instances where necessary to protect the water uses.

(12) State the public health, safety, environmental or general welfare risks associated with non-regulation.

Without this regulation, the discharge of chloride or sulfate will be regulated beyond the levels necessary to protect environmental resources and public health. There are no public health, safety, environmental or general welfare risks associated with not changing the regulation.

(13) Describe who will benefit from the regulation. (Quantify the benefits as completely as possible and approximate the number of people who will benefit.)

The citizens of the Commonwealth will benefit from the regulation since it will provide the appropriate level of water quality protection for the surface waters of the Commonwealth, without requiring over-regulation of discharges.

## Regulatory Analysis Form

(14) Describe who will be adversely affected by the regulation. (Quantify the adverse effect as completely as possible and approximate the number of people who will be adversely affected.)

No persons will be adversely affected by the regulation, which corrects an overly-protective implementation of the water quality criteria for these substances.

(15) List the persons, groups or entities that will be required to comply with the regulation. (Approximate the number of people who will be required to comply.)

Persons with proposed or existing discharges of chloride or sulfate to surface waters of the Commonwealth must comply with the regulation.

(16) Describe the communications with and inputs from the public in the development and drafting of the regulation. List the persons and/or groups who were involved, if applicable.

The Water Resources Advisory Committee (WRAC) was briefed on the draft final regulation at its meeting of May 8, 2002. WRAC supported the Department's presenting the recommendation for final rulemaking to the Board.

(17) Provide a specific estimate of the costs and/or savings to the regulated community associated with compliance, including any legal, accounting or consulting procedures which may be required.

The amendment is expected to reduce compliance costs on the regulated community by not requiring costly treatment technologies that may not be appropriate to the discharges. Costs and savings cannot be determined because of site-specific considerations and because there is no historical accounting of costs because the change in the regulation that would have caused increased costs have been in place only within the last year.

## Regulatory Analysis Form

(18) Provide a specific estimate of the costs and/or savings to local governments associated with compliance, including any legal, accounting or consulting procedures which may be required.

No costs will be imposed directly upon state or local governments by this regulation, except to the extent they may own or operate a wastewater treatment plant and discharge sulfate or chloride at levels that would exceed water quality criteria.

(19) Provide a specific estimate of the costs and/or savings to state government associated with the implementation of the regulation, including any legal, accounting or consulting procedures which may be required.

This regulation is based on and will be implemented through existing Department programs, procedures and policies. There are no additional implementation costs associated with this regulation.

### Regulatory Analysis Form

(20) In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.

	<b>Current FY Year</b>	<b>FY +1 Year</b>	<b>FY +2 Year</b>	<b>FY +3 Year</b>	<b>FY +4 Year</b>	<b>FY +5 Year</b>
<b>SAVINGS:</b>	\$	\$	\$	\$	\$	\$
<b>Regulated Community</b>	Not Measurable					
<b>Local Government</b>	“					
<b>State Governments</b>	“					
<b>Total Savings</b>	“					
<b>COSTS:</b>						
<b>Regulated Community</b>	Not Measurable					
<b>Local Government</b>	“					
<b>State Governments</b>	“					
<b>Total Costs</b>	“					
<b>REVENUE LOSSES:</b>						
<b>Regulated Community</b>	Not Measurable					
<b>Local Government</b>	“					
<b>State Governments</b>	“					
<b>Total Revenue Losses</b>	“					

(20a) Explain how the cost estimates listed above were derived.

Not Applicable.

### Regulatory Analysis Form

(20b) Provide the past three year expenditure history for programs affected by the regulation.

Program	FY-3	FY-2	FY-1	Current FY
Water Quality Management	\$16,704,886	\$16,605,573	\$18,741,606	\$15,995,084

(21) Using the cost-benefit information provided above, explain how the benefits of the regulation outweigh the adverse effects and costs.

The benefits to the citizens of the Commonwealth will accrue from protecting the surface waters of the Commonwealth at the appropriate level. The protection includes providing potable water supplies with protection to the levels required by the Pennsylvania Safe Drinking Water Act.

(22) Describe the nonregulatory alternatives considered and the costs associated with those alternatives. Provide the reasons for their dismissal.

There were no non-regulatory alternatives available to consider in this case because the regulation was intended to correct the impacts and costs of the previous regulation.

(23) Describe alternative regulatory schemes considered and the costs associated with those schemes. Provide the reasons for their dismissal.

There were no alternative regulatory schemes to consider in this case. See response to Question 22.

## Regulatory Analysis Form

(24) Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulations.

EPA has no water quality criterion for sulfate and Pennsylvania has had one for decades; therefore, Pennsylvania is more stringent than federal requirements. Because the criterion is the same as the secondary maximum contaminant level of the federal drinking water program, this regulation will continue to assure meeting drinking water program objectives. In addition, moving the point of compliance to the water supply withdrawal will grant some relief for dischargers of sulfates, particularly in waters distant from water supply withdrawals.

(25) How does the regulation compare with those of other states? Will the regulation put Pennsylvania at a competitive disadvantage with other states?

The regulatory amendment will not put Pennsylvania at a competitive disadvantage to other states, but will provide a leveling mechanism to make Pennsylvania more competitive.

(26) Will the regulation affect existing or proposed regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.

The regulation amends the regulation at § 96.3.

(27) Will any public hearings or informational meetings be scheduled? Please provide the dates, times, and locations, if available.

In addition to the public input gathered as described in Question #16, notice of the proposed rulemaking and a 45 day public comment period was published in the *Pennsylvania Bulletin* and local newspapers across the Commonwealth. A public hearing was held in Harrisburg on February 26, 2002 to discuss the regulation and to receive oral testimony on it.

## Regulatory Analysis Form

(28) Will the regulation change existing reporting, record keeping, or other paperwork requirements? Describe the changes and attach copies of forms or reports which will be required as a result of implementation, if available.

No additional reporting, record keeping, or other paperwork will be required.

(29) Please list any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, elderly, small businesses, and farmers.

The regulatory amendment does not contain any special provisions that are designed to meet the particular needs of minorities, elderly, small businesses, farmers or others because such provisions are not deemed to be necessary.

(30) What is the anticipated effective date of the regulation; the date by which compliance with the regulation will be required; and the date by which any required permits, licenses or other approvals must be obtained?

The regulation will become final and effective upon publication in the *Pennsylvania Bulletin* as final rulemaking. New or renewed NPDES permits reflecting the regulation would be issued according to current timelines that apply to permit applications.

(31) Provide the schedule for continual review of the regulation.

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

**CHAPTER 96 - WATER QUALITY STANDARDS IMPLEMENTATION  
SULFATE AND CHLORIDE  
COMMENT AND RESPONSE DOCUMENT**

<u>List of Commentators</u>	<u>Presented Testimony</u>	<u>Requested Final Rule</u>
1. Paul Hart Hart Resource Technologies 5035 Route 110 Creekside, PA 15732	X	
2. Rebecca Snyder Hart Resource Technologies P.O. Box 232 Creekside, PA 15732		
3. Sean McGowan Specialty Steel Industry of Pennsylvania c/o Allegheny Ludlum Corporation 1000 Six PPG Place Pittsburgh, PA 15222		
4. Russell J. Dudek AK Steel Corporation – Butler Works P.O. Box 832 Butler, PA 16003-0832		
5. Eric A. Ross National Association of Water Companies c/o LeBoeuf, Lamb, Greene and MacRae 200 North Third Street, Suite 3001 P.O. Box 12105 Harrisburg, PA 17108-2105		
6. Fred A. Sembach Pennsylvania Chamber of Business and Industry 417 Walnut Street Harrisburg, PA 17101-1902		
7. William T. Morris American Water Works Association 1924 N. Second Street, 1 <sup>st</sup> Floor Harrisburg, PA 17102		

8. Kurt J. Weist  
Citizens for Pennsylvania's Future  
212 Locust Street – Suite 410  
Harrisburg, PA 17101

9. William and Dave Marshall  
Marshall's Wood Products  
9554 Allentown Boulevard  
Grantville, PA 17028

10. Michael G. Young  
Pennsylvania Coal Association  
212 North Third Street  
Suite 102  
Harrisburg, PA 17101

X

**Comment:** The proposed rulemaking to add sulfate and chloride to the criteria in Chapter 96.3(d) is necessary to essentially return to the standards that existed prior to October 2000. As stewards of the environment, the oil and gas industry has abided by the osmotic pressure criterion to limit discharges to protect drinking water and aquatic life. A chloride limit of 250 mg/L provides no environmental benefit and has no scientific basis, other than as a cosmetic/esthetic concern. If the proposal is not approved, the effect on the environment and industry may be severe. The oil and gas industry must meet the energy demands of society, and new production methods to do so produce more wastewater for disposal. Without the new regulation, disposal costs in Pennsylvania will be 4-8 times the national average, and the costs cannot be passed on to the consumer. Without affordable disposal, the industry will have to reduce production and lay off employees to stay in business. (1)

**Response:** The Department appreciates the testimony in support of the regulation change.

**Comment:** We agree with the EQB that Section 96.3(d) be amended to include sulfate and chloride for the following reasons.

- EPA's secondary MCLs for sulfate and chloride are non-regulatory, not enforced standards, and none of the studies conducted found that these substances are toxic or cause irreversible damage. EPA's current listing on IRIS, a database of chemical specific risk information on human health information does not include sulfate or chloride. To protect the drinking water source, the criteria should be applied at the point of water supply withdrawals.
- The National Technical Advisory Committee in "Quality Criteria for Water" recommended maintaining osmotic pressure (OP) levels less than that caused by a 15,000 mg/L solution of sodium chloride, which is 450-500 milliosmoles/kg. DEP regulates OP at 50 milliosmoles /kg, which is protective of aquatic life not only of chlorides, but also other dissolved ions, such as carbonates, sulfates, nitrates, sodium,

potassium, calcium and magnesium. Since it includes many ions, the criterion protects aquatic life from a wide range of possible sources. (2)

**Response:** The Department appreciates the testimony in support of the regulation change.

**Comment:** Although we realize economics does not play a part in water quality criteria, we point out that, without a revision to the sulfate and chloride standards, Pennsylvania waters may be compromised due strictly to economic factors in disposing of wastewaters. (2)

**Response:** Your comment is acknowledged.

**Comment:** EQB should adopt EPA's intended approach to regulating SMCLs as "reasonable goals," not absolute values, and should allow for compliance at the customer's tap point, not point of water supply withdrawal. Forcing dischargers to reduce levels where there is no impact on water quality does not make scientific or economic sense. (3)

**Response:** The regulation change will provide the most appropriate application of the ambient water quality standards for sulfate and chloride. Although EPA does not require enforcement of SMCLs, the Pennsylvania Safe Drinking Water Act and regulations do. It is appropriate for a wastewater discharger to treat for contaminants added to a water system by the discharge. In accordance with the Department's regulations at 25 PA Code Section 93.4, relating to statewide uses, the Department protects all surface waters of the Commonwealth for the potable water supply use, which is defined in Section 93.3 as water used "after conventional treatment for drinking..." The proposed regulation change provides that protection.

**Comment:** EQB should determine if there are other contaminants that qualify for inclusion in Section 96.3(d). (3)

**Response:** The Department reviews and revises, as necessary, water quality standards at least every three years in compliance with federal regulations.

**Comment:** We support EQB's current proposal as a small step in the right direction to correct application of sulfate and chloride criteria. (4)

**Response:** The Department appreciates the testimony in support of the regulation change.

**Comment:** The majority of states (26) have no potable water supply standards for sulfate and chloride. Taste and odor parameters, like sulfate and chloride, that are not health concerns, are regulated (if at all) at the water supply distribution system after treatment. Ten states that do regulate these parameters apply them at the point of water supply withdrawal. The fourteen other states apply them to a limited number of segments designated for PWS. SMCLs are not enforceable under the federal regulations and are not used to set water quality based limits in NPDES permits. (4)

**Response:** The Department appreciates the additional information.

**Comment:** Current Pennsylvania regulation does not consider dilution, time, or if there are any downstream points of water supply withdrawal. Costs to comply with the current regulation are enormous. There is no human health hazard and sulfate and chloride are not regulated for protection of aquatic life. Changing the point of application will not adversely affect human health. (4)

**Response:** The Department appreciates the testimony in support of the regulation change.

**Comment:** A health based sulfate level of at least 1000 mg/L is supported by the scientific literature, specifically Heizer (1997), Gomez (1995) and CDC (1999) and in several previous studies where a correlation between diarrhea and higher levels of sulfate was observed only when sulfate exceeded 750 mg/L. A criterion at that level is not inconsistent with US EPA's drinking water regulations. The Board should set the water quality standard for sulfate at or above 1000 mg/l or rescind it. (4)

**Response:** The Department appreciates the summary of health studies on sulfate submitted with your comments. However, no new toxicity information was received in response to the Department's request. The Department is not recommending a change in the sulfate criterion at this time, but will retain the criterion of 250 mg/L.

**Comment:** The Board should propose a regulation increasing the chloride criterion for chloride from 250 mg/L to at least 500- 1000 mg/L, or rescind it because the contribution of chloride from drinking water is only about 0.33 – 1.6% of the total daily intake. There is no evidence of adverse health effects from chloride so that the World Health Organization has decided not to propose a health based guideline for it. Chloride is also necessary for the body to function, such as in maintaining proper osmotic pressure, water balance and acid-base balance. There is no good reason to force NPDES discharges to reduce chloride simply to address esthetic concerns. (4)

**Response:** The Department has no information on which to base a change from the current chloride criterion to 500 or 1000 ug/L. Application of the chloride criterion at the point of water supply withdrawal, which this regulation prescribes, will provide the protection for the potable water use required by the regulation, but not over-regulate discharges when the use is not impacted.

**Comment:** The proposed change to add sulfate and chloride to the exceptions in section 96.3(d) will provide the appropriate level of protection for the potable water supply use. The change is supported by the current scientific information because there are no adverse human health effects from the substances, and effluent limits are calculated using stringent conditions, which applies an additional margin of safety to protect potable water supplies. The proposal will continue to develop water quality based effluent limits when there is a potential for a downstream potable water supply to be negatively impacted by a discharge. (5, 7)

**Response:** The Department appreciates the testimony in support of the regulation change.

**Comment:** We oppose any recommendation to increase the 250 mg/L standard for sulfate until the science definitively determines a higher level protects all population groups, including prenatal and young children. Recent Center for Disease Control's studies indicate a significant gap in the data involving prenatal and young children. US EPA will soon decide if it will propose a primary MCL for sulfate. It would be prudent for the department to wait for the pending EPA decision before considering raising the sulfate standard. (5, 7)

**Response:** The Department is not recommending a change to the sulfate water quality criterion at this time. The Department has reviewed information from US EPA's June 3, 2002 preliminary determination on sulfate, which found that sulfate would not be regulated with an MCL because such regulation would not present a meaningful health risk reduction. Having reviewed EPA's determination, the Department will retain the water quality criterion for sulfate at 250 mg/L, consistent with the secondary maximum contaminant level (SMCL), but is moving the point of compliance to the water supply withdrawal. This change will continue to assure protection of the potable water supply use and will grant some relief for dischargers of sulfates, particularly in waters distant from water supply withdrawals.

**Comment:** We strongly support the proposed change in the point of application of the sulfate and chloride criteria. The proposal is an important step in correcting the problems caused by the earlier change in the regulation. It is appropriate because the effects of the substances are esthetic and not health related, because the Safe Drinking Water Act also exists to provide a safe drinking water supply, and failure to implement the proposal will mean the expenditure of significant moneys by Pennsylvania business and industry with no commensurate benefit to public health. (6)

**Response:** The Department appreciates the testimony in support of the regulation change.

**Comment:** Even with the proposed change to the regulation, Pennsylvania continues to regulate sulfate and chloride more stringently than necessary under federal law and more stringent than most other states first, by having water quality criteria for sulfate and chloride to use in NPDES permits, and by applying the potable water supply use to all surface waters, whether or not they are or could be used as potable water sources. This places Pennsylvania businesses at a competitive disadvantage relative to other states. This situation could be greatly improved if the Department moves forward to adopt a health based criterion for sulfate. Additionally, DEP should pursue similar studies for chloride. (6)

**Response:** No new toxicity information was received in response to the Department's request. The Department is not recommending a change in the sulfate water quality criterion, but will retain the criterion of 250 mg/L. In addition, the Department has no information on which to base a change from the current chloride criterion. Application of the current criteria at the point of water supply withdrawal, which this regulation prescribes, will provide the protection for the potable water use required by the regulation, but not over-regulate discharges when the use is not impacted.

**Comment:** The preamble does not explain how the oversight through which sulfate and chloride were omitted from § 96.3(d) came to DEP's attention. We request that explanation. (8)

**Response:** When the Department was preparing to implement the regulatory revisions that became effective in November 2000, internal staff discussions resulted in the identification of impacts that had not been anticipated based on the consolidation of Tables 3 and 4 in § 93.7. These impacts were not identified during the public comment period on the regulation. The changes will correct the necessity to include effluent limits for sulfate and chloride where they are not needed to protect the potable water supply use.

**Comment:** The preamble, which states that the regulation change "provides the appropriate level of protection for the uses of the surface waters," neglects the uses of recreation and esthetics. Only effects on the potable water supply and the aquatic life uses are addressed. The Board must determine that the changes will be consistent with these water uses. The "taste and odor" rationale for the existing criteria suggests that the proposed change is not consistent with the statewide recreational use. The Board must analyze the additional water uses and whether the proposed changes would be consistent with them. The preamble asserts that other uses will be protected by application of other criteria, but it does not identify the specific criteria that protect recreational uses.

Criteria must ensure that all designated uses are achieved and maintained. There is no reason the criteria originally developed to protect potable water supplies cannot be used to protect other uses. Unless the Board is confident that any change to the existing regulations would be consistent with all of the statewide designated uses, adopting the proposed change would be unlawful. (8)

**Response:** The osmotic pressure criterion, which is used to control dissolved solids, is an effective means of limiting the amounts of sulfate, chloride and other ions that affect aquatic life. Likewise, that control also limits the concentrations that are an esthetic concern. Historically, in setting water quality criteria, the Department, as well as US EPA and other state agencies, considers human health and aquatic life as the most stringent uses of surface waters. Toxicity information is used to develop criteria that protect those two uses, and, because of the general lack of data on effects on other uses and the acknowledged over-reaching importance of health and aquatic life concerns, those values are generally considered to be protective of all other uses.

In addition to osmotic pressure, esthetics is generally controlled through the narrative criteria in § 93.6. Any instances where the protection is shown to be inadequate can be addressed through that section.

**Comment:** The Department should drop or delay development of a health based criterion for sulfate because of the existence of a more restrictive esthetics criterion and the possibility that EPA will soon develop a primary MCL for sulfate.

Assuming a health criterion would be higher than the existing criterion, the existing taste and odor criterion would always control, and it is therefore a waste of resources to pursue a health criterion that would be higher than the existing one. If DEP is contemplating substituting a health based criterion for the existing criterion, it should plainly say so. That substitution would be misguided because 1) the longevity of the existing criterion entitles it to considerable deference and should be displaced only for clearly articulated reasons; and 2) if the health criterion is applied at the potable water supply withdrawal, the cost of sulfate removal will be shifted from the discharger to the public in the form of higher water rates. (8)

**Response:** Based on US EPA's June 3, 2002 preliminary determination for sulfate, finding that sulfate would not be regulated with a primary MCL because such regulation would not present a meaningful health risk reduction, the Department will not be developing a health-based water quality criterion.

**Comment:** Hydrogen sulfate and hydrogen sulfide from a local sewer plant give off nauseating odors that make my family and prospective employees ill. We hope regulations will regulate hydrogen sulfate so that problems like our families' will not be experienced by others. (9)

**Response:** The water quality criterion for sulfate is set to limit the concentration of sulfate in water to protect from taste and odor problems.

**Comment:** We support the proposed change adding sulfate and chloride to the exceptions listed in 25 PA Code Section 96.3(d). The regulation will fully protect the potable water supply use while reducing unnecessary regulatory burdens and eliminating the confusion caused by the previous inadvertent change to Chapter 93. (10)

**Response:** The Department appreciates the testimony in support of the regulation change.



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\_\_\_\_\_  
(DEPUTY ATTORNEY GENERAL)

DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ENVIRONMENTAL QUALITY BOARD  
(AGENCY)

BY: *[Signature]*

\_\_\_\_\_  
DATE OF APPROVAL

DOCUMENT/FISCAL NOTE NO. #7-375

\_\_\_\_\_  
DATE OF APPROVAL

DATE OF ADOPTION: \_\_\_\_\_

BY: *[Signature]*

(Deputy General Counsel)  
(Chief Counsel, Independent Agency)  
(Strike inapplicable title)

Check if applicable  
Copy not approved. Objections attached.

TITLE: DAVID E. HESS, CHAIRMAN  
(EXECUTIVE OFFICER, CHAIRMAN OR SECRETARY)

Check if applicable. No Attorney General approval or objection within 30 days after submission.

ORDER ADOPTING REGULATIONS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ENVIRONMENTAL QUALITY BOARD  
CHLORIDE AND SULFATE  
25 PA CODE, CHAPTER 96



**NOTICE OF FINAL RULEMAKING  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
ENVIRONMENTAL QUALITY BOARD  
(25 PA. CODE CHAPTER 96)  
Water Quality Standards Implementation**

**Order**

The Environmental Quality Board (Board) is amending 25 Pa. Code Chapter 96 (relating to water quality standards implementation) as set forth in Annex A.

This order was adopted by the Board at its meeting of September 17, 2002.

**A. Effective Date**

These amendments will go into effect upon publication in the *Pennsylvania Bulletin* as final rulemaking.

**B. Contact Persons**

For further information contact Edward R. Brezina, Chief, Division of Water Quality Assessment and Standards, Bureau of Water Supply and Wastewater Management, 11th Floor, Rachel Carson State Office Building, P.O. Box 8467, Harrisburg, PA 17105-8467, (717) 787-9637 or Michelle Moses, Assistant Counsel, Bureau of Regulatory Counsel, 9th Floor, Rachel Carson State Office Building, P.O. Box 8464, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the AT&T Relay Service by calling 1-800-654-5984 (TDD users) or 1-800-654-5988 (voice users) and request that the call be relayed. This final-form rulemaking is available electronically through the Department of Environmental Protection's (Department) website (<http://www.dep.state.pa.us>).

**C. Statutory Authority**

This final-form rulemaking is being made under the authority of §§5(b)(1) and 402 of the Clean Streams Law (35 P.S. §§691.5(b)(1) and 691.402), which authorize the Environmental Quality Board to develop and adopt rules and regulations to implement the provisions of the Clean Streams Law, and §1920-A of the Administrative Code of 1929 (71 P.S. §510-20), which grants the Board the power and duty to formulate, adopt and promulgate rules and regulations for the proper performance of the work of the Department.

**D. Background and Summary**

The purpose of this rulemaking is to revise existing water quality regulations at Chapter 96 (relating to water quality standards implementation). These regulatory revisions add the sulfate and chloride criteria to the exceptions in § 96.3(d) (relating to water quality protection requirements). Section 96.3(d) provides for exception to the application of water quality criteria at all points instream after mixing for certain substances. The criteria for these substances, total dissolved solids (TDS),

fluoride, nitrite-nitrate, phenolics, sulfate and chloride, are applicable at the point of all existing or planned surface potable water supply withdrawals, fully protecting the potable water supply use.

This regulatory change will provide the appropriate level of protection for the potable water supply use. The current scientific information supports this change because, as discussed below, there are no adverse human health effects from the substances at the levels that the substances are regulated. Effluent limitations required for discharges of these substances are calculated using critical (or stringent) conditions that include a requirement that the criteria be met 99% of the time, even at the low-flow condition known as Q<sub>7-10</sub> (i.e., the lowest seven-day consecutive flow in a ten-year period), a condition that is seldom reached, even in drought conditions. This provides an additional margin of safety built into the effluent limitations to protect the potable water supplies, prior to withdrawal. In addition, other surface water uses will be protected by application of general criteria and other criteria listed in §§ 93.6 and 93.7 (relating to general water quality criteria and specific water quality criteria).

The Board has considered all of the public comments received on its proposed rulemaking in preparing this final-form regulation. The draft final-form regulation was discussed with and approved by the Department's Water Resources Advisory Committee (WRAC) on May 8, 2002.

#### **E. Summary of Comments and Responses on the Proposed Rulemaking**

In the preamble to the proposed regulation, the Department specifically sought information and comment on an appropriate health-based value for sulfate. Although some information was provided with comments, no new information was presented. The Department is not recommending a change to the sulfate water quality criterion.

Comments were received from one person who offered testimony at the public hearing and from nine other persons who provided written comments. All but one comment supported the regulation. Some comments supported changing the sulfate and chloride criteria but there is not sufficient information on which to develop a change in the water quality criteria. The one opposing comment was concerned about protection of the esthetic use under the new regulation. The esthetic use, as well as the aquatic use, is protected by the osmotic pressure criterion and, if necessary, by the general narrative criteria in Section 93.6.

#### **F. Benefits, Costs, and Compliance**

Executive Order 1996-1 provides for a cost/benefit analysis of the final-form regulation.

##### **Benefits**

Overall, the citizens of the Commonwealth will benefit from the change because it provides the appropriate level of protection for the uses of Pennsylvania's surface waters.

##### **Compliance Costs**

The amendment will reduce future compliance costs on the regulated community, when compared to the existing regulation. Effluent limitations for chloride and sulfate will be applied where needed to protect potable water supplies, which will preclude the need for costly advanced treatment

technologies or source reduction techniques to reduce these substances from wastewater discharges. Because effluent limits are case-specific, there is no accurate way to predict the costs required or saved by a single discharger or all dischargers.

### **Compliance Assistance Plan**

The regulation will be implemented according to procedures already available for the substances currently included in § 96.3(d). The technical guidance, Implementation Guidance for Application of Section 93.5(e) (DEP 391-2000-019), will be amended to include sulfate and chloride and also to update the outdated section reference to reflect § 96.3(d). Staff are available to assist regulated entities in complying with the regulatory requirements if any questions arise.

### **Paperwork Requirements**

The regulatory revision should have no significant paperwork impact on the Commonwealth, its political subdivisions, or the private sector.

### **G. Pollution Prevention**

In keeping with Governor Schweiker's interest in encouraging pollution prevention solutions to environmental problems, this regulation provides for controlling the discharge of the listed substances to the water environment to achieve or maintain water quality standards.

### **H. Sunset Review**

This regulation will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulation effectively fulfills the goals for which it was intended.

### **I. Regulatory Review**

Under section 5(a) of the Regulatory Review Act, the Act of June 30, 1989 (P.L. 73, No. 19), (71 P.S. §745.5(a), the Department submitted a copy of the proposed rulemaking on January 11, 2002 to the Independent Regulatory Review Commission and to the Chairpersons of the Senate and House Environmental Resources and Energy Committees. In addition to submitting the proposed amendment, the Department has provided the Commission and Committees with a copy of a detailed regulatory analysis form prepared by the Department in compliance with Executive Order 1996-1, "Regulatory Review and Promulgation." A copy of this material is available to the public upon request.

In preparing the final-form regulation, the Department has considered the comments received from the public. These comments are addressed in the comment and response document and Section E of this order. The Commission and the Committees did not provide comments on the proposed rulemaking.

This final-form regulation was deemed approved by the House Environmental Resources and Energy Committee and the Senate Environmental Resources and Energy Committee on \_\_\_\_\_, 2002. The Commission met on \_\_\_\_\_, 2002 and approved the final-form regulation in accordance

with section 5(c) of the Regulatory Review Act.

**J. Findings of the Board**

The Board finds that:

- (1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder at 1 Pa. Code §§ 7.1 and 7.2.
- (2) A public comment period was provided as required by law. In addition, a Board hearing was held. All comments were considered.
- (3) This regulation does not enlarge the purpose of the proposal published at 32 *Pennsylvania Bulletin* 428.
- (4) This regulation is necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this order.

**K. Order of the Board**

The Board, acting under the authorizing statutes, orders that:

- (a) The regulations of the Department, 25 PA Code Chapter 96, are amended by amending § 96.3(d) to read as set forth in Annex A, with ellipses referring to the existing text of the regulation.
- (b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for approval and review as to legality and form, as required by law.
- (c) The Chairperson shall submit this order and Annex A to the Independent Regulatory Review Commission and the Senate and House Environmental Resources and Energy Committees as required by the Regulatory Review Act.
- (d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.
- (e) This order shall take effect immediately upon publication in the *Pennsylvania Bulletin*.

BY:

DAVID E. HESS  
Chairperson  
Environmental Quality Board

## Annex A

### Chapter 96. Water Quality Standards Implementation

#### § 96.3. Water quality protection requirements.

\* \* \* \* \*

(c) To protect existing and designated surface water uses, the water quality criteria described in Chapter 93 (relating to water quality standards), including the criteria in §§ 93.7 and 93.8a(b) (relating to specific water quality criteria; and toxic substances) shall be achieved in all surface waters at least 99% of the time, unless otherwise specified in this title. The general water quality criteria in § 93.6 (relating to general water quality criteria) shall be achieved in surface waters at all times at design conditions.

(d) As an exception to subsection (c), the water quality criteria for total dissolved solids, nitrite-nitrate nitrogen, phenolics, **chloride, sulfate** and fluoride established for the protection of potable water supply shall be met at least 99% of the time at the point of all existing or planned surface potable water supply withdrawals unless otherwise specified in this title.

\* \* \* \* \*





Pennsylvania Department of Environmental Protection

Rachel Carson State Office Building

P.O. Box 2063

Harrisburg, PA 17105-2063

October 8, 2002

**The Secretary**

Phone: 717-787-2814

E-Mail: DavidHess@state.pa.us

Mr. Robert E. Nyce, Executive Director  
Independent Regulatory Review Commission  
14<sup>th</sup> Floor, Harristown #2  
333 Market Street  
Harrisburg, PA 17120

RE: Final Rulemaking: Chloride and Sulfate (#7-375)

Dear Bob:

Pursuant to Section 5.1(a) of the Regulatory Review Act, enclosed is a copy of a final-form regulation for review by the Commission. This final rulemaking was approved by the Environmental Quality Board (EQB) on September 17, 2002.

This final rulemaking revises the water quality regulations to add sulfate and chloride to the exception in § 96.3(d), which moves the point of application of the criteria for the substances listed in this section to the point of all existing or planned surface potable water supply withdrawals. The purpose of this amendment is to address an inadvertent consequence of the water quality amendments that were promulgated in November 2000 under the RBI. In addition to establishing Chapter 96, those amendments deleted Table 4 of § 93.7 (relating to specific water quality criteria) and clarified that the criteria listed in Table 3 of that section are applicable statewide. Historically, sulfate and chloride were not applied as statewide parameters of concern, and no adverse environmental or public health effects have been documented in Pennsylvania to support a change in this position. Therefore, this amendment will negate the necessity to include effluent limits for sulfate and chloride where they are not needed to protect the potable water supply use.

The proposed rulemaking was adopted by the EQB on November 20, 2001, and published on May 4, 2002, with a 45-day public comment period and one public hearing. The proposal included a request for comment on an appropriate health-based value for sulfate. There were ten commentators to the proposal, one of whom also provided testimony at the hearing. The comments were generally supportive of the proposal, with the exception of one that expressed concern about protection of the esthetic use under the new regulation. Both the esthetic and aquatic uses are protected by the osmotic pressure criterion and, if necessary, through the criteria in § 93.6 (relating to general water quality criteria). Some comments were offered on the health-based value for sulfate, but no new information was presented. Therefore, no change has been recommended to the sulfate water quality criterion.



Mr. Robert E. Nyce

2

October 8, 2002

WRAC reviewed and endorsed the draft final rulemaking on May 8, 2002.

The Department will provide the Commission with any assistance required to facilitate a thorough review of this final-form regulation. Section 5.1(e) of the Act provides that the Commission shall, within ten days after the expiration of the committee review period, approve or disapprove the final-form regulation.

For additional information, please contact Sharon Trostle, Regulatory Coordinator, at 787-4526.

Sincerely,

A handwritten signature in black ink, appearing to read "David E. Hess". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

David E. Hess  
Secretary

Enclosures



**TRANSMITTAL SHEET FOR REGULATIONS SUBJECT TO THE  
REGULATORY REVIEW ACT**

I.D. NUMBER: 7-375  
 SUBJECT: Chloride and Sulfate  
 AGENCY: DEPARTMENT OF ENVIRONMENTAL PROTECTION

**TYPE OF REGULATION**

- Proposed Regulation
- X Final Regulation
- Final Regulation with Notice of Proposed Rulemaking Omitted
- 120-day Emergency Certification of the Attorney General
- 120-day Emergency Certification of the Governor
- Delivery of Tolled Regulation
  - a. With Revisions
  - b. Without Revisions

RECEIVED  
 2002 OCT -8 PM 12:34  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION

**FILING OF REGULATION**

DATE	SIGNATURE	DESIGNATION
10-8	<i>Cindy Zirin</i>	HOUSE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
10/8	<i>Pat Carnathan</i>	SENATE COMMITTEE ON ENVIRONMENTAL RESOURCES & ENERGY
10/8	<i>A. Belmont</i>	INDEPENDENT REGULATORY REVIEW COMMISSION
		ATTORNEY GENERAL
	<del><i>[Signature]</i></del>	LEGISLATIVE REFERENCE BUREAU

September 17, 2002