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Subject: Proposed Wastewater Treatment Requirements, 25 Pa. Code Ch. 95 (39 Pa.B. 6467)
Attachments: UWAG Comments on Pennsylvania Proposed Rule for New Sources of Wastewaters Containing High TDS.pdf

Attached are Comments of the Utility Water Act Group (UWAG) on the Pennsylvania Environmental Quality Board's Proposed Rule for New Sources of Wastewaters Containing High Total Dissolved Solids (TDS).

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Thank you,
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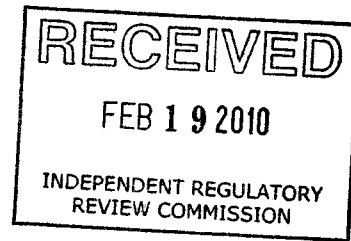
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**COMMENTS OF
THE UTILITY WATER ACT GROUP (UWAG)
ON THE PENNSYLVANIA ENVIRONMENTAL QUALITY
BOARD'S PROPOSED RULE FOR NEW SOURCES OF WASTEWATERS
CONTAINING HIGH TOTAL DISSOLVED SOLIDS (TDS)**

**Proposed Rulemaking
25 Pa. Code Ch. 95
Wastewater Treatment Requirements
39 Pa.B. 6467
Saturday, November 7, 2009
<http://www.pabulletin.com/secure/data/vol39/39-45/2065.html>**

February 12, 2010

Summary

COMMENTS OF THE UTILITY WATER ACT GROUP (UWAG) ON THE PENNSYLVANIA ENVIRONMENTAL QUALITY BOARD'S PROPOSED RULE FOR NEW SOURCES OF WASTEWATERS CONTAINING HIGH TOTAL DISSOLVED SOLIDS (TDS)

Proposed Rulemaking

25 Pa. Code Ch. 95

Wastewater Treatment Requirements

39 Pa.B. 6467

Saturday, November 7, 2009

<http://www.pabulletin.com/secure/data/vol39/39-45/2065.html>

The Utility Water Act Group, a group of energy companies and their national trade associations, comments, first, that the proposed wastewater treatment requirements do not address the sources of wastewater that prompted the DEP to propose them in the first place. The DEP's concern is elevated levels of TDS in certain river segments during low flow, particularly in 2008, and wastewater from abandoned mines and natural gas production. But abandoned mine discharges are exempted, there is a separate "no-discharge" requirement for natural gas production, and the proposed requirements would not have prevented the high-TDS incidents of 2008.

Second, the proposed requirements are a conglomeration of drinking water standards, in-stream water quality concerns, and purported "treatment" (i.e., technology-based) requirements. But none of these three elements is consistent with clean water law. The drinking water standards are "welfare-based" standards for drinking water from the tap but are proposed as "treatment" requirements at the end-of-pipe. The proposal ignores water quality-based permit limits and the TMDL process. And the DEP has failed to analyze the cost, nonwater environmental impacts, and energy impacts of the requirements, as would be required for technology-based requirements.

For these reasons the proposed requirements appear to UWAG to be arbitrary and unreasonable. UWAG recommends using the Pennsylvania stakeholder process to develop a better approach to TDS pollution.

**COMMENTS OF
THE UTILITY WATER ACT GROUP (UWAG)
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CONTAINING HIGH TOTAL DISSOLVED SOLIDS (TDS)**

1. Introduction

These are the comments of the Utility Water Act Group (UWAG)¹ on the Environmental Quality Board's proposal to amend 25 Pa. Code Chapter 95 to establish new effluent standards for new sources of wastewaters containing high Total Dissolved Solids (TDS).

The proposed regulation would set monthly average limits of 500 mg/L total dissolved solids (TDS), 250 mg/L total chlorides, and 250 mg/L total sulfates. These would be applied to new or expanded discharges that did not exist on April 1, 2009, and have a concentration that exceeds 2,000 mg/L TDS or a TDS loading more than 100,000 pounds per day. Proposed § 95.10(a), (b).

UWAG's comments are legal rather than factual, based on what we understand to be the legal prerequisites for promulgating limits on water pollutants, especially the prerequisites of the federal Clean Water Act, 33 U.S.C. §§ 1311, 1313, 1314, and 1316. As an organization of electric power companies, our concern is the harm the proposed standards will likely do to

¹ UWAG is a voluntary, *ad hoc*, non-profit, unincorporated group of 208 individual energy companies and three national trade associations of energy companies: the Edison Electric Institute, the National Rural Electric Cooperative Association, and the American Public Power Association. The individual energy companies operate power plants and other facilities that generate, transmit, and distribute electricity to residential, commercial, industrial, and institutional customers. The Edison Electric Institute is the association of U.S. shareholder-owned energy companies, international affiliates, and industry associates. The National Rural Electric Cooperative Association is the association of nonprofit energy cooperatives supplying central station service through generation, transmission, and distribution of electricity to rural areas of the United States. The American Public Power Association is the national trade association that represents publicly owned (municipal and state) energy utilities in 49 states representing 16 percent of the market. UWAG's purpose is to participate on behalf of its members in EPA's rulemakings under the CWA and in litigation arising from those rulemakings.

energy supply. We expect that other well-informed commenters, such as the Electric Power Generation Association, will address the issues with more attention to Pennsylvania specifics.

In light of all the problems, outlined below, that we see with the proposed TDS requirements, we suggest that it would be wise to re-evaluate the needs of the Commonwealth and the range of possible solutions. Since we understand there is already a functioning stakeholder process to address this very issue, we think it only prudent to resort to that stakeholder process and let it run its course.

An overarching objection to the proposed Pennsylvania Wastewater Treatment Requirements is that they seem to lack the minimum rationality that is universally required of laws in this country.² A large part of the problem addressed is drainage from abandoned mines. And yet, as page 4 of the rulemaking notice says, the proposed requirements are “not intended to include discharges from treatment facilities for abandoned mine discharges (AMD), which existed on April 1, 2009, where new treatment facilities are installed or existing facilities are modified.” The Pennsylvania Department of Environmental Protection (DEP) also appears to be concerned about natural gas production, but the proposed requirements include (apart from the TDS requirements) a “no discharge” requirement for any “direct source or site of fracturing, production, field exploration, drilling, or well completion.” So the proposed TDS requirements are aimed entirely at wastewater that is not the source of the problem, and our understanding is that the proposed requirements would not have prevented the high levels of TDS in the Monongahela in 2008 that are apparently the impetus for the proposal.

² We do not presume to opine on the law of Pennsylvania. However, it does appear to us that, even with the limited review given to regulations by Pennsylvania courts, a “legislative rule” will be invalidated if it is not reasonable or not within the power granted by the legislature, and an “interpretive” rule if it is unwise or violates legislative intent. *See Eagle Environmental II, L.P. and Chest Township v. Dep’t of Environmental Protection*, 2002 Pa. Environ. LEXIS 20, *17 (Pa. Environ. 2002).

There are other objections to the requirements as well. First, it appears to us that the DEP may lack legal authority to promulgate these regulations in their present form and would be acting *ultra vires* to do so. At best the DEP has not stated a coherent legal basis for the regulations. Second, assuming that the regulations are being enacted pursuant to what appear to be the most pertinent sections of the federal Clean Water Act, the DEP has not performed the analyses required by that statute.

2. The DEP appears to be relying on none of the provisions of the federal Clean Water Act, or on several of them indiscriminately

The federal Clean Water Act authorizes two different kinds of permit limitations, “technology-based” and “water quality-based.”³ The DEP’s proposal is purportedly “treatment-based” (or technology-based). The proposed standards are called “effluent standards,” and the changes are being made under Chapter 95, while additional changes to Chapter 93 on water quality standards are apparently anticipated for the future. The proposed requirements are intended, then, to be technology-based.

On the other hand, the basis for the requirements appears to be water quality-based. It is capsulized in this sentence from page 3 of the proposal: “The Monongahela River Watershed is being adversely impacted by TDS discharges and many points in the watershed are already impaired, with TDS, sulfates and chlorides as the cause.” Apparently the DEP has created a hybrid type of permit limit for which it reasons that below-standard in-stream water quality justifies uniform end-of-pipe technology-based limits for new dischargers.

³ Page 3 of the rulemaking notice attempts to bridge this gap by observing that dischargers must be managed through permit limitations required by the “more stringent of treatment-based or water quality-based standards.” This is a correct description of the design of the federal Clean Water Act but irrelevant to our objection. It is one thing to set technology-based limits and water quality-based limits according to the proper procedures and apply the more stringent. It is another thing entirely to start with a water quality problem, take a welfare-based drinking water standard, and transmute it into what appears to be a treatment-based end-of-pipe limit.

This reasoning has no place under the federal Clean Water Act. Under the Clean Water Act, water quality-based permit limits begin with water quality standards. If a discharger's effluent has a "reasonable potential" to cause or contribute to an exceedance of those standards, then a water quality-based permit limit is justified. See 40 C.F.R. § 122.44(d)(1)(i). However, it is calculated based on (1) the flow of the effluent, (2) the concentration of the pollutant in the effluent, (3) the flow of the receiving water, and (4) the concentration of pollutant in the receiving water. The method is laid out in detail, at least for toxic pollutants, in EPA's *Technical Support Document for Water Quality-based Toxics Control*, EPA/505/2-90-001 (March 1991).

If state waters are impaired, the Clean Water Act contemplates that the problem will be addressed by listing the waters under § 303(d) and then establishing total maximum daily loads. See 33 U.S.C. § 1313(d).⁴ One result of the DEP's approach to TDS is to avoid the procedural and factual requirements of the TMDL program.

If the proposed requirements were intended to be water quality-based, it would seem appropriate to consider first the already-existing legal requirements that might address the TDS issue. For example, Chapter 93 already has a numeric criterion for osmotic pressure. And the Department of Environmental Protection has already begun to develop instream criteria for TDS, chlorides, and sulfates. It is not clear why the DEP wants to bypass this water quality-based process by setting purportedly treatment-based requirements in the short term. The haste is particularly puzzling because the intent seems to be to solve a problem experienced on a few river segments during unusual low-flow conditions in 2008. It does not appear to be a crisis that demands short-term emergency measures.

⁴ Also, requirements may be related to a state's antidegradation policy. The DEP includes antidegradation-like language in its proposal but does not appear to be relying on the Pennsylvania Water Quality Antidegradation Implementation Guidance, 391-0300-002 (November 29, 2003).

Whatever the need, there is no place in the federal Clean Water Act for a water quality-based standard that applies uniformly to dischargers on all waterbodies no matter what the in-stream water quality. Hence the proposed Pennsylvania standards most closely resemble technology-based standards. But for technology-based limits, too, the DEP's proposed requirements evade the established legal requirements of the Clean Water Act.

3. The DEP has not adequately analyzed the cost of complying with the proposed standards

Technology-based standards are set regardless of receiving water quality, based on what control technology is available to reduce the concentration of a pollutant. First, the agency must explore what control technologies are available and how much they are able to reduce pollutants. We see no sign the DEP has investigated control technologies for TDS (though the estimate of \$0.25/gal. for treatment costs suggests that the DEP must have some technical information).

Importantly, to set technology-based limits the regulatory agency must consider a list of factors, which include cost, energy requirements, and non-water quality environmental impact. For new source performance standards, for example (which the proposed Pennsylvania standards resemble), EPA is directed to "take into consideration" the "cost of achieving such effluent reduction, and any non-water quality, environmental impact and energy requirements."

33 U.S.C. § 1316(b)(1)(B).

If the proposed standards are technology-based,⁵ then the DEP must (assuming the standards are new source performance standards) take into account the cost of achieving the standards, the impact on energy supply, and the adverse environmental impacts that meeting the

⁵ Moreover, for industries that already have federal technology-based effluent limitations guidelines (like the steam electric industry), the DEP would have to justify a "best professional judgment" requirement that EPA did not choose to implement. This would require, at a minimum, explaining why EPA's effluent limitations guidelines are not adequate for Pennsylvania facilities.

proposed standards would have. There should be a substantial administrative record and a reasoned decision on these factors.

As to cost, the proposal says that it is “anticipated that treatment costs could be on the order of \$0.25/gallon.” Proposal p. 5. Since a single sentence stating an anticipated cost does not meet the statutory standard of taking into account the cost of compliance, one would expect to find in the record a detailed economic analysis. Moreover, the analysis would have to do more than merely predict the cost of treatment. It would have to determine the impact of the cost on the industry and, at a minimum, decide whether the industry can reasonably bear the cost. This sort of information may be available in the DEP’s rulemaking record, but if so is hard to find, and the published proposal does not give the public adequate notice of where the analysis can be found.

We might add that, if the new standards are new source performance standards, the federal Clean Water Act says that any point source constructed so as to meet all applicable standards of performance may not be subjected to more stringent standards of performance for ten years beginning when construction is completed or during the period of depreciation or amortization of the facility. 33 U.S.C. § 1316(e).

4. The DEP has not adequately considered energy requirements

As for considering “energy requirements,” we do not see reference to a written analysis in which the DEP has assessed what effect the new standards will have on energy supply. For example, the standards apply to electric power generating facilities. The DEP is obligated, at least if the federal Clean Water Act applies, to consider how much harm the new standards would do to electric power supply. To be of any value this analysis should take into account the multitude of federal environmental standards (air, water, and solid waste) now facing the electric power industry, in addition to the new Pennsylvania standards. Whatever industries are affected,

the wastewater treatment required by the proposed standards will consume energy. This effect does not appear to have been considered.

5. The DEP has not adequately considered non-water quality environmental impact

Finally, under the federal statute, for technology-based limits “non-water quality, environmental impact” must be considered. Some of the methods of treating wastewater require crystallizing brine or mixing wastewater with solids to form a sludge for disposal in a landfill. They will increase the demand for landfill space. Also, treatment of the wastewater to meet the proposed standards will increase the consumptive use of water. These impacts must be analyzed.

6. The DEP’s authority under State law is unclear, or at least not clearly stated

It may be that the DEP is relying not on federal law but on state law. Indeed, the only legal authority cited (other than the Administrative Code), is section 5 of the Clean Streams Law, 35 P.S. § 691.5. The Clean Streams Law, although it does contain Article III for “industrial wastes,” is aimed primarily at sewage and drinking water. The National Pollutant Discharge Elimination System, which seems more pertinent to this type of regulation, is found in Chapter 92 of Title 25 of the Pennsylvania Codified Regulations.

Whether the regulations are being promulgated under the drinking water rules or the NPDES rules, the DEP needs to state clearly its legal authority. Section 691.5, which is all that the DEP cites, is a general “Powers and Duties” provision that gives the department general authority to adopt rules and regulations for water quality management and pollution control. If that is the only authority, then it is not enough to justify creating a whole new system of water regulation, separate and different from the water quality standards, water quality standard-based permit limits, or technology-based standards of the federal Clean Water Act. At a minimum, the DEP needs to state explicitly the legal authority, federal or state, on which it is relying. As the record now stands, it appears that adopting this proposal would be *ultra vires*.

Although the impetus for the requirements is impairment of water quality (on certain rivers under low-flow conditions) and although the requirements are written like technology-based limits, the proposed requirements appear to be based not on the Clean Water Act but on the Safe Drinking Water Act. Page 2 of the rulemaking notice mentions that the 2008 episode on the Monongahela exceeded water quality standards at 17 potable water supply intakes from West Virginia to Pittsburgh. More to the point, the proposed requirements are set at the federal secondary maximum contaminant levels under the Safe Drinking Water Act. See 40 C.F.R. § 143.3.

Secondary drinking water regulations are designed to protect the public “welfare,” particularly with respect to odor and appearance. 33 U.S.C. § 300f(2). Yet the proposed Pennsylvania requirements are intended to deal with public health issues of brominated disinfection by-products and bladder cancer. See page 2 of the rulemaking notice. Moreover, the federal secondary MCLs are “reasonable goals for drinking water quality,” not in-stream standards and certainly not end-of-pipe technology (treatment-based) standards.

In short, the proposed requirements seem to be a mash-up of drinking water standards, in-stream water quality standards, and end-of-pipe treatment standards but are justified by the legal requirements for none of those three programs.

7. Conclusion

All things considered, it appears to UWAG that the proposed standards are being promulgated with too much haste and too little analysis. In particular, a large part of the problem is drainage from abandoned mines (and concern is expressed about new discharges from natural gas production), yet the proposed requirements do not cover AMD and do include a separate “no discharge” requirement for natural gas production. As a result, the proposed TDS requirements are aimed entirely at industry wastewaters that are not the source of the problem.

Furthermore, if the proposed requirements were intended to be water quality-based, it would be appropriate to consider first the already-existing legal requirements that might address the TDS issue or justify defensible in-stream criteria for TDS, chlorides, and sulfates under Chapter 93. Once in-stream criteria are developed, unimpaired and impaired waters can be addressed through the NPDES permitting program using water quality-based effluent limits or the TMDL program. It is not clear why the DEP wants to bypass this water quality-based process by setting apparently unsupported treatment-based requirements in the short term. As for treatment-based (technology-based) requirements, before establishing them the agency must explore what control technologies are available; how much they are able to reduce pollutants; what the cost, energy requirements, and non-water quality environmental impacts are for the control technologies; and whether industry can bear the cost. We see no sign the DEP has conducted a detailed investigation of control technologies for TDS.

In light of these deficiencies, the proposed requirements need to be reconsidered in detail. UWAG understands that there is a stakeholder process in Pennsylvania that is already engaged in addressing the complex issues of total dissolved solids. It would be wise for the Commonwealth to work with the stakeholders to craft a more carefully considered approach than the proposed effluent standards.