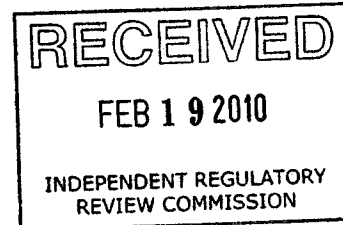


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February 9, 2010



Environmental Quality Board
P.O. Box 8477
Harrisburg, PA 17105-8477

**Subject: Proposed Rulemaking, Environmental Quality Board [25 PA. CODE 95],
Wastewater Treatment Requirements [39 Pa.B. 6467] [Saturday,
November 7, 2009]**

Environmental Quality Board:

Following are comments of the Electric Power Generation Association (EPGA) on the Environmental Quality Board Proposed Rulemaking Wastewater Treatment Requirements which appeared in the Pennsylvania Bulletin on November 7, 2009.

EPGA is a trade association of electric generating companies with headquarters in Harrisburg, Pa. Collectively, our members own and operate more than 145,000 megawatts of electric generating capacity, approximately half of which is located in Pennsylvania and surrounding states. Our members include:

AES Beaver Valley, LLC
Cogentrix Energy, Inc.
Dynergy Inc.
Exelon Generation
LS Power Associates, L.P.
RRI Energy, Inc.
Tenaska, Inc.

Allegheny Energy Supply
Constellation Energy
Edison Mission Group
FirstEnergy Generation Corp
PPL Generation
Sunbury Generation
UGI Development Company

These comments represent the views of EPGA as an association of electric generating companies, not necessarily the view of any individual member company with respect to any specific issue.

The PA Department of Environmental Protection (DEP) recently proposed amendments to 25 Pa Code Chapter 95 that includes new effluent standards for new sources of wastewaters containing high Total Dissolved Solids (TDS), chlorides and sulfates. The

DEP chose limits set at the current National Secondary Drinking Water standards in 40 CFR Chapter 143 as end-of-pipe concentrations for all new "High-TDS" wastewater discharges. The term "new discharge" includes an additional discharge, an expanded discharge or an increased discharge from a facility in existence prior to April 1, 2009.

The DEP has not provided an adequate basis for the new standards in the proposed rule. Simply adopting a secondary drinking water standard meant for aesthetics as an instream water quality criteria to protect aquatic life has no basis and cannot be supported as a basis for the rulemaking. Neither can it be used as a level for human health. Any data used as a basis for a new standard must be properly evaluated as to its scientific validity. There is considerable disagreement on the interpretation of the data provided in recent studies used by the DEP as the basis for the proposed rulemaking. These studies require further evaluation, particularly with respect to the application of these standards across the State. Even providing that evaluation, the studies do not constitute an adequate basis for the standards or the way they are being applied.

It does not appear that DEP evaluated the available technologies for each different type of wastewater discharge that will potentially be affected. Part of the evaluation required by the DEP for a technology-based standard is the cost of the technology and whether or not the technology is commonly used for that purpose. More research should be conducted to determine if treatment methodologies are available and whether or not they can achieve effective treatment of TDS, sulfates and chlorides for all types of discharges including complex systems such as high-volume users and high-flow discharges. Available technologies capable of treating industrial and sanitary wastewater to the levels necessary to comply with the proposed standards are limited and are restricted to unique applications. These constituents are dissolved in the wastewater and are not readily removed by conventional precipitation and filtering technologies. As a practical matter, technologies capable of achieving the proposed standards are limited to some form of nanofiltration, evaporation, solidification or a combination of the three.

Nanofiltration essentially means reverse osmosis (RO) for these wastewaters. Evaporation could include simple evaporation or evaporation with crystallization of the resulting brine. Solidification involves mixing the wastewater with other solid materials to form a sludge for eventual landfill disposal. All of these technologies require large capital expenditures with very high annual operation and maintenance costs, use large amounts of energy that need to be made up with increased electric generation, increase the consumptive water use significantly for even moderate wastewater flows, putting additional stress on the State's water budget, and significantly increase the limited landfill space required for disposal.

An RO unit recently evaluated for treating abandoned mine discharge (AMD) exceeded \$22 million in capital costs. Annual operating and maintenance cost estimates exceeded \$60 million when considering offsite disposal of the purge waste. Costs to construct an RO unit sized to treat landfill leachate were estimated at nearly \$10 million, with an annual operating cost of nearly \$12 million. RO technology generates a concentrated brine in the process, and typically results in a 30% to 40% consumptive

use of the wastewater volume being treated. In these two examples, base flow to the receiving stream could be reduced by as much as 150,000 to nearly 900,000 gallons per day.

Evaporative technologies could cost three to four times the cost of RO units. Recent estimates developed for treatment of wastewater from power plant air pollution control equipment exceeded \$60 million in construction costs, over \$6 million dollars in annual operation and maintenance costs, consumed over 50,000 cubic yards of landfill space per year and consumed all of the 400 gpm of wastewater flow. This example of evaporative technologies also will require 4,000 kilowatt hours to operate, or up to 35 million kilowatt hours of electric energy per year.

Existing treatment technologies capable of complying with the proposed limits will result in billions of dollars of both construction and operating costs. These technologies will reduce the base flow of our waterways by a volume equivalent to 30% to 100% of the wastewater flows being treated. Thousands of cubic yards of landfill space will be consumed. The DEP has not offered any justification for such extreme financial cost to consumers. The DEP has not offered any review or justification for the environmental costs these treatment technologies create. And the DEP has not presented any evaluation of why these controls are needed to protect water quality or aquatic life.

The DEP appears to have justified the new technology-based standards on the high TDS condition in the Monongahela River during the summer of 2008. However, a scientific study conducted on the Monongahela River during the high TDS event provided a mass balance of TDS loading to the river. The study showed industrial discharges contributed a relatively minor percentage of the total TDS loading to the river. Rather, the study showed the high TDS condition in the river was the result of extremely low river flow and pollution from acid mine drainage (AMD) sources. The proposed standards on industrial sources along the Monongahela River would not have prevented the high TDS conditions in 2008 from occurring.

The EPGA member companies support sound regulation to protect the natural resources of the Commonwealth, and we respect the DEP's role in establishing those regulations. However, it appears the DEP failed to evaluate the potential social and economic costs of this proposal as well as the potential environmental impacts that will result. Also, the Chapter 95 proposed effluent limitations should be developed to obtain successful and realistic cross-departmental permitting within the DEP and minimize conflict that may exist with federal standards. Efforts by a facility to meet requirements in one permitting program should not result in unintended negative permit implications in another program. For example, many of the recent or proposed changes in air quality regulations will require facilities to upgrade or install new air pollution control technologies. Subsequently, the installation of these air pollution control technologies has the potential to impact TDS concentrations, therefore making it difficult for facilities to meet or project the cost of all of its compliance obligations. This level of regulatory uncertainty threatens future capital investments in pollution control technologies.

Review of all of these factors is required by the very laws that give the DEP its authority to regulate wastewater discharges to the waters of the Commonwealth. The DEP

proposal, therefore, should be tabled until all of these issues can be fully examined and re-proposed after all of the relevant facts have been considered through the WRAC stakeholder process.

Common to all of these comments is the recognition that these proposed regulations will not solve the water quality issues of concern. The major source of these pollutants is AMD. These proposed regulations also could create significant decreases in the base-flow of our streams, since the only options for treatment are highly consumptive. As proposed, these regulations have the potential to impact many different industries and produce unintended consequences. EPGA supports the stakeholder group that has been working with the DEP during the last few months and remains hopeful that process will produce a workable alternative to the Department's proposed rule. There is no need to rush to a heavy-handed regulatory solution to a problem that to date has been inadequately defined and whose solution may be much more cost-effective than this proposed rulemaking. EPGA encourages the DEP to take the time needed to allow for a tempered, balanced decision on these issues.

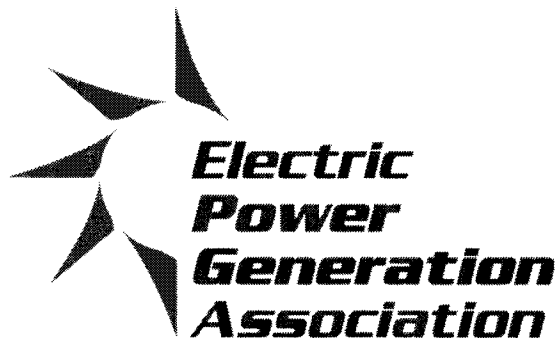
Thank you for your consideration of these comments.

Sincerely,

A handwritten signature in black ink that reads "DL Biden". The signature is written in a cursive, slightly slanted style.

Douglas L Biden, President
Electric Power Generation Association

DLB:sb



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February 9, 2010

Subject: Proposed Rulemaking, Environmental Quality Board [25 PA. CODE 95], Wastewater Treatment Requirements [39 Pa.B. 6467] [Saturday, November 7, 2009]

Following is a one-page summary of the Electric Power Generating Association's comments to the Department of Environmental Protection (DEP) on the above referenced rulemaking:

The DEP has not provided an adequate basis for the new standards in the proposed rule. Simply adopting a secondary drinking water standard meant for aesthetics as an instream water quality criteria to protect aquatic life has no scientific basis and cannot be supported as a basis for the rulemaking. Any data used as a basis for a new standard must be properly evaluated as to its scientific validity.

It does not appear that DEP evaluated the available technologies for each different type of wastewater discharge that will potentially be affected. Part of the evaluation required by the DEP for a technology-based standard is the cost of the technology and whether or not the technology is commonly used for that purpose. More research should be conducted to determine if treatment methodologies are available and whether or not they can achieve effective treatment of TDS, sulfates and chlorides for all types of discharges including complex systems such as high-volume users and high-flow discharges. Available technologies capable of treating industrial and sanitary wastewater to the levels necessary to comply with the proposed standards are limited and are restricted to unique applications.

Existing treatment technologies capable of complying with the proposed limits will result in billions of dollars of construction and operating costs. These technologies will reduce the base flow of our waterways by a volume equivalent to 30% - 100% of the wastewater flows being treated, since the only options for treatment are highly water consumptive. Thousands of cubic yards of landfill space will be consumed. The DEP has not offered any justification for such extreme financial cost to consumers. The DEP has not offered any review or justification for the environmental costs these treatment technologies create. And the DEP has not presented any evaluation of why these controls are needed to protect water quality or aquatic life.

The DEP appears to have justified the new technology-based standards on the high TDS condition in the Monongahela River during the summer of 2008. However, a scientific study conducted on the Monongahela River during the high TDS event provided a mass balance of TDS loading to the river. The study showed industrial discharges contributed a relatively minor percentage of the total TDS loading to the river. Rather, the study showed the high TDS condition in the river was the result of extremely low river flow and pollution from AMD sources. The proposed standards on industrial sources along the Monongahela River would not have prevented the high TDS conditions in 2008 from occurring.

The Chapter 95 proposed effluent limitations should be developed to obtain successful and realistic cross-departmental permitting within the DEP and minimize conflict that may exist with federal standards. Efforts by a facility to meet requirements in one permitting program should not result in unintended negative permit implications in another program. As proposed, these regulations have the potential to impact many different industries and produce unintended consequences.

The DEP proposal should be tabled until all of these issues can be fully examined and re-proposed after all of the relevant facts have been considered through the WRAC stakeholder process, which EPGA supports.