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Sent: Friday, February 12, 2010 4:19 PM
To: EP, RegComments
Subject: Proposed amendments to 25 Pa. Code Chapter 95 (relating to Wastewater Treatment Requirements)
Attachments: TDS WATER PADEP ARIPPA 2010.pdf

My apologies this PDF version is grammatically correct and hopefully clearer...thanks Jeff

ARIPPA HEREBY SUBMITS its official comments concerning: **Proposed amendments to 25 Pa. Code Chapter 95 (relating to Wastewater Treatment Requirements)** as published in the November 7, 2009 Pennsylvania Bulletin <http://www.pabulletin.com/secure/data/vol39/39-45/2065.html>

DATE: February 12, 2010

Submitted via e-mail to: RegComments@dep.state.pa.us The Environmental Quality Board P.O. Box 8477 Harrisburg, PA 17105-8477

Subject: Wastewater Treatment Requirements Proposed Regulations

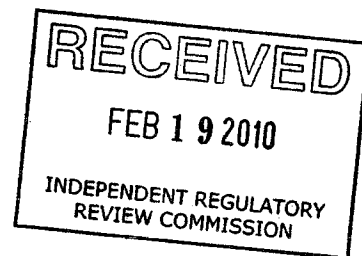
Dear Environmental Quality Board:

ARIPPA's comments represent its numerous environmentally beneficial alternative energy electric generating plants, approximately 5000 citizens directly or indirectly employed by the industry, and approximately 10% of the total electricity generated in Pennsylvania alone.

ARIPPA, on behalf of its member companies, hereby provides comments on PADEP's proposed amendments to 25 Pa. Code Chapter 95 relating to Wastewater Treatment Requirements. ARIPPA appreciates this opportunity to comment.

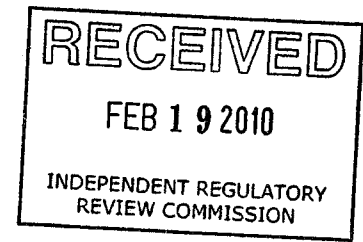
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I. Historical significance and background:

For nearly two centuries coal has been mined in various regions of the United States. Coal mining operations continue today and will likely continue for at least another century. In the past, coal that was very low in heat content (BTU's) and accordingly undesirable in the marketplace was randomly discarded all across the landscape of coal mining regions. This "waste coal" accumulated and lay idle on thousands of acres of land...land that possessed a variety of aesthetic, useful, and beneficial qualities. Over time wind, rain, and other naturally occurring environmental conditions caused the piles of "waste coal" to alter and/or expand their negative "environmental footprint" on America's limited land resources.

A few decades ago a beneficial use of waste coal was developed with the aid of technological advancements and support from governmental agencies (PURPA), and private/public investors. This beneficial use was designed to convert large quantities of "waste coal" into alternative electricity ...electricity to meet the energy needs of hundreds of thousands of households and businesses. Removing waste coal discarded from past mining activities cleared thousands of acres of land, formerly hidden under tons of this "idle waste". Converting the waste coal into energy and utilizing the by-product ash residue to reclaim vacant and damaged

abandoned mine lands and streams (back to their natural environmental state and usefulness) are some of the positive effects realized by the development of this new industry.

The waste coal to alternative energy industry is truly unique...being one of the few environmentally beneficial alternative energy industries. Understanding the unique environmental advantages of the continued beneficial use of waste coal is not only pivotal to understanding the motives behind our comments listed below but also the true partnership our industry shares with the goals and ideals of various watershed groups and EPA-PADEP. Accordingly we ask and appreciate your special attention to our industry, its comments, and concerns for the future of America.

II. Description of ARIPPA Member Facilities:

Organized in 1988, ARIPPA is a non-profit trade association based in Camp Hill Pennsylvania. Its membership is comprised of electric generating plants producing alternative energy and/or steam ("Co-Generation" plants produce and sell both alternative energy electricity and steam). Most ARIPPA member plants are currently located in or near the Anthracite or Bituminous coal regions of the United States.

Collectively member plants generate alternative energy electricity using environmentally-friendly Circulating Fluidized Bed (CFB) boiler technology to convert waste coal (coal mining refuse) and/or other alternative fuels such as biomass into alternative energy and steam. Most of the ARIPPA member facilities use a stationary circulating fluidized bed ("CFB") waste coal-fired boiler that generates electricity for sale at a minimum capacity of more than 25 MWe

Today, there are CFB alternative energy plants converting coal mining waste (refuse) in Pennsylvania, West Virginia, New York, and Utah. Several other non-utility alternative energy plants in the United States utilize CFB Technology to convert coal, biomass, and even agricultural waste into a desperately needed commodity collectively known as "alternative energy".

More than half of the member plants operate under a long term "Power Purchase Agreement", supplying alternative energy to utility companies at a fixed price. Accordingly ARIPPA member facilities have continued to meet or exceed the ever increasing environmental compliance regulations and laws (mandated since 1987) by directly absorbing the compliance costs without increasing the fees paid by electric utility rate payers.

ARIPPA facilities provide a unique environmental benefit by converting waste coal as fuel and utilizing state-of-the-art circulating fluidized bed ("CFB") technology. ARIPPA facilities utilize coal refuse (waste) from both past and current mining activities, and thereby reclaim abandoned strip mines and abate acid mine drainage from waste coal piles at no cost to taxpayers. By converting waste coal into alternative energy, ARIPPA members are removing one of the principal sources of contamination to surface water and groundwater in coal mining regions of the United States.

The industry provides a zero cost option for removing waste coal piles from the environment. Should that option discontinue the entire responsibility for removal and clean up would fall on the tax payers and government, a task the PADEP has testified would cost billions of dollars and take over 500 years to accomplish. ARIPPA plants work closely with various local watershed groups such as EPCAMR and WPCAMR as well as Earth Conservancy to reclaim abandoned mine lands and convert polluted streams to clean and usable.

In addition to the environmental benefits resulting from the removal and conversion of waste coal, ARIPPA facilities have minimized potential emission pollutants traditionally associated with using a fossil fuel by incorporating state-of-the-art technology...true CLEAN COAL technology utilizing CFB boilers.

ARIPPA requests that EQB consider the following factors as they review our comments on the proposed regulations:

- The waste coal to alternative energy industry is truly unique...being one of the few environmentally beneficial alternative energy industries.
- The unique nature of the CFB CLEAN COAL technology employed by the ARIPPA member plants
- Waste coal tonnage is removed and converted into energy
- Alternative energy is generated
- Thousands of jobs, wages and economic expansion is realized
- Tax payer reclamation costs are saved
- Thousands of acres of land and miles of streams beneficially are reclaimed at no cost to taxpayers

III. General Comments:

ARIPPA is providing comments on the proposed amendment to the Chapter 95 regulations; specifically Sections 95.2 and 95.10 regarding the discharge of high TDS water.

ARIPPA is concerned with the Department's overall approach to the proposed regulatory changes in Chapter 95. The proposed rule was originally designed to address two specific issues that were very different in nature and scope, yet the Department decided to summarize the issue as a TDS problem combining the TDS issue with a separate Sulfates and Chlorides issue.

The proposed rule was originally designed to address two specific issues:

1. The first and primary issue was related to the development of the Marcellus Shale Gas exploration efforts throughout a large part of Pennsylvania and how to manage "frac-water" issues and production water from new wells being drilled and developed. This came to a head when there were numerous NPDES discharge applications submitted to PADEP to discharge brine water to the West Branch of the Susquehanna River. The Department was concerned that similar requests would be made for discharge of brines in the major water drainage basins of Pennsylvania. The Department was concerned that any brine discharges that did not address the TDS concentrations of the brines would utilize the majority of the assimilative capacity of the streams and result in water quality violations at the intakes of potable water supplies on the streams and rivers.
2. The second issue was related to the possibility of water quality standards being exceeded for TDS and Sulfate levels in the Monongahela River at the intakes of potable water supplies in the basin during low flow periods.

Two separate issues...both with a TDS component. One created by "new planned discharges" and the other an issue that needs further scientific analysis to determine the extent and cause.

The issues that need to be addressed with further scientific analysis to determine the extent and cause are:

1. TDS/Chloride effluent criteria for treating and discharging oil/gas field brines (both frac water brines and production brines); and
2. TDS/Sulfate Problems in the Monongahela River, initially, and other streams/rivers where the Department has similar data suggesting a similar impact

ARIPPA suggests addressing these very specific issues separately. Rather the Department has proposed with these regulations that both of these very specific issues be addressed with one broad sweeping regulatory change to existing rules.

The Department has proposed establishing end-of-pipe discharge standards for TDS/Sulfates/Chlorides of 500mg/l, 250 mg/l, and 250 mg/l, respectively. The Department further proposed to limit the number of facilities covered by the rule by establishing criteria to define what was meant by a high TDS wastewater requiring treatment:

- If the waste water contained 2,000 mg/l of TDS –or-

- If the waste water had a total TDS loading of 100,000 lbs/day

As an example of the confusion and complexity the combination of these issues creates; a wastewater discharge that had 2,000 mg/l at a 100 gpm would produce approximately 2,401 lbs/day of TDS loading and be covered by the rule and have the end of pipe discharge limits applied...yet, a wastewater discharge that had 1,900 mg/l at a 5 MGD discharge rate producing 79,230 lbs/day of TDS would not be covered by the rule.

A new discharge is defined in the proposed regulations as:

“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.”

This definition is problematic from the perspective that any increase in volume triggers the TDS treatment requirements. For example, the continued mining and expansion of an underground mine results in the actual amount of water being treated to be increased, although (in most cases), this expansion was anticipated in the permit application of the initial design construction and operation of the Mine Drainage Treatment Facilities.

Secondly, the definition is problematic from the perspective that it does not consider:

- Acid mine drainage discharges from abandoned mines,
- Unreclaimed mines where bonds may have been forfeited or there is no longer a responsible party for treatment,
- Mines that are no longer active where a party is responsible for long-term treatment,
- Mines where PADEP has required trust funds for long-term treatment based on effluent criteria in the agreement
- Chapters 87-90 and the effluent criteria established to encourage remining (a very successful program in Pennsylvania).

ARIPPA suggests that in some cases, it may make economic and technical sense to relocate these discharges to a new discharge point, but not impose the new end-of-pipe discharge standards currently being proposed.

The proposed regulations may result in industrial sources (that have located in manufacturing and processing facilities in Pennsylvania) to relocate based on their inability to expand their operations without extensive capital and operation-maintenance expenditures on yet unproven technology. Accordingly ARIPPA suggests that PADEP complete a comprehensive socio-economic analysis of the impact of the proposed regulation on the various sectors that will ultimately be covered (i.e., oil and gas, mining, electric generation, municipal waste water treatment systems, industrial/manufacturing/chemical sectors) as required by Section 5(a) (5) of The Clean Streams Law. As part of this comprehensive analysis, PADEP should identify the technologies that would:

- insure that the proposed effluent limits would be achieved;
- the capital costs of said technologies;
- the operation and maintenance costs;
- the energy demands (including carbon emissions);
- the costs related to the management of residual/hazardous wastes that would be produced.

While PADEP has indicated an anticipation of comments from regulated sectors would provide economic analysis and an expectation that the Chapter 95 Task Force of the Water Resources Advisory Committee would also provide economic data, these two sources alone, while being helpful, do not replace the comprehensive, socio-economic analysis which is required by law.

ARIPPA believes that the Department currently has the necessary regulatory “tools” to address each regulatory issue separately while working directly with the sectors affected.

We offer the following suggestions as to how the Department should address these issues:

- Withdraw the current “combined format” proposed regulations

- Utilize a Best Profession Judgment (BPJ) process to make the determination in establishing effluent criteria for oil and gas brines. WRAC and the Task Force could be used to develop the process and criteria as to how the Department would conduct the BPJ analysis. This process would offer the possibility of a determination of the technology to be applied to potential dischargers of treated brines while insuring the Chapter 93 Water Quality Standards were met and maintained for new dischargers.
- Convene a stakeholders group that would address high TDS levels during low flow conditions, as suggested by WRAC (for the Monongahela River Basin). This can be accomplished without triggering a TMDL program for the Monongahela River and similar streams-rivers in the region. A key component would be to obtain a commitment from West Virginia to participate in the development and implementation of a management program, especially since the Department has stated that water quality was seriously impacted as it crosses the border from West Virginia into Pennsylvania.

ARIPPA suggests that PADEP develop a statistically-sound scientific dataset to address the Monongahela River Basin issues such a dataset would answer the following questions:

1. What does the historical data (30+ years) regarding Water Quality in the Monongahela River Basin indicate? (versus 2-5 year data)
2. Would a real-time monitoring system provide better insights during low flow conditions to understand the problem...since low flow conditions appear to be a seasonal problem
3. What other factors are contributing to the problem and by how much?
 - All Permitted Facilities, including legacy discharge treatment obligations
 - Abandoned deep mine discharges
 - Runoff from active and abandoned mines
4. What are the managed discharge potentials and capabilities during low flow conditions?

ARIPPA suggests that PADEP withdraw the current "combined format" proposed regulations. Based on the currently proposed regulations ARIPPA members will be potentially negatively impacted depending upon each plants design, management, and operations (which vary):

- The discharge of blow-down water or other water treated from at the power plant site.
- The requirement to treat coal mine drainage from fuel sources can be a direct or indirect impact based on whether or not the member owns and operates the fuel source or is acquiring fuel from 3rd parties
- The impact of beneficial use of ash on the TDS on surface water

IV. Suggested Amendments/Specific Comments:

ARIPPA is providing the following comments and suggested specific amendments to the proposed in the event that PADEP does not heed our "withdraw" suggestion and instead moves forward to finalize the regulations.

CURRENTLY Proposed Chapter 95.5(a) reads as follows:

*"(a) For the purpose of implementing this section, a new discharge of High-TDS wastewater is a discharge that did not exist on **April 1, 2009**, and includes a TDS concentration that exceeds 2,000 mg/L or a TDS*

loading that exceeds 100,000 pounds per day. 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."

Suggested amendment to above:

"...For the purpose of implementing this section, a new discharge of High-TDS wastewater is a discharge that did not exist on the effective date of this regulation, including a TDS concentration that exceeds 2,000 mg/l and a TDS loading that exceeds 100,000 pounds per day."

Reasoning: There are many discharges that may exceed the 2,000 mg/l level, but the total loading from the discharge would be less than 2500 lbs/day. Since the impact is a result of loading.

Suggested amendment to above:

"The term "new discharge" includes an additional discharge, an expanded discharge or an increased discharge from a facility in existence prior to the effective date of this regulation. The term "new discharge" shall not include any "legacy discharges" which are defined as follows:

1. Pre-existing discharges associated with mining operations permitted under:

25 Pa. Code Chapters 87, Subchapter F;

25 Pa. Code Chapters 88, Subchapter G; or

25 Pa. Code Chapters 90, Subchapter G;

2. Discharges from existing mines that are presently treating water under NPDES permits and have or are establishing long term treatment trusts or other financial assurances to cover future costs;

3. Discharges associated with the aggregation of multiple pollution sources and relocated as part of a more cost effective and efficient comprehensive treatment system program;

4. Upgrades of existing treatment systems to enable them to receive and treat larger volumes of mine drainage;

5. Discharges that are being treated by treatment systems that are being funded by long term treatment trusts or other long term financial assurances, including those administered by the Department, non-profit entities, Trustees, mining companies or third parties on behalf of any of them;

6. Discharges for which passive treatment systems, including but not limited to anoxic drains, wetlands or other biologic systems are used to treat mine drainage;

7. Discharges from waste coal remining or coal refuse reprocessing sites where waste coal is being utilized as fuel for power generation at facilities recognized under the Pennsylvania Alternative Energy Portfolio Standards Act and the long term discharges associated with the site are expected to be significantly reduced or abated.

Reasoning:

The April 1, 2009 date should be replaced with the effective date of the regulations.

The exclusions outlined above insure that PADEP maintains an exemption for discharges that:

- Address existing long-term problems associated with Acid Mine Drainage
- Provide millions of dollars of environmental reclamation work at no cost to taxpayers
- Represent significant problems for existing operations...having existing obligations for long-term treatment
- Address planned increases in discharge volumes related to the ongoing mining operations

CURRENTLY Proposed Chapter 95.1(b) (5) reads as follows:

"(5) In addition to paragraphs (1)—(4), discharges to groundwater, including land application and discharges to existing mine pools, must comply with §§ 91.51 and 91.52 (relating to underground disposal)

Suggested amendment to above:

“(5) In addition to paragraphs (1)—(4), discharges to groundwater, including land application and discharges to existing mine pools, must comply with §§ 91.51 and 91.52 (relating to underground disposal) **except discharges to mine pools that are permitted under 25 Pa. Code Chapters 87, 88, 89 and 90.**

Reasoning:

There are numerous cases where water is being obtained from a deep mine to be used in the coal preparation process. Often the discharge is returned to the mine including silt and slurry. Also, there are discharges of water back into a deep mine that are of better quality than the water quality currently found in the deep mine (providing dilution). In addition, Chapters 87-90 allow for discharges into the deep mine in the case where the water in the deep mine is being treated. Under these different scenarios, the discharge of High TDs water into an existing mine pool should be authorized.

Suggested amendment:

In the alternative, since much of the discussion and the contents of the preamble relates to managing brines associated with development of the Marcellus Shale gas play, another approach is to **add a Section 4 to Chapter 95.1 that specifically applies to oil and gas brines** and eliminate and contain the effluent limits proposed for TDS and Chlorides to these discharges.

END OF SPECIFIC COMMENTS

ARIPPA wishes to thank the EQB, for allowing our industry to offer comments and suggested changes to the proposed regulations. We hope our comments will be accepted in a constructive and cooperative spirit.

The unique nature of the CFB CLEAN COAL technology employed by the ARIPPA member plants and the environmental benefits provided to the Commonwealth...reclaiming abandoned strip mines (through the beneficial use of a unique ash) while minimizing acid mine drainage from waste coal piles... and the conversion of one of the principal sources of environmental contamination in the Commonwealth into a needed alternative energy... at no cost to Pennsylvania taxpayers... symbolizes our ongoing effort to continually improve the landscape of our Commonwealth and our nation.

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