

From: jamcnelly1@arippa.org
Sent: Tuesday, December 22, 2009 2:44 PM
To: EP, RegComments
Cc: Tate, Michele
Subject: Beneficial Use of Coal Ash Proposed Regulations
Attachments: ASH PADEP ARIPPA COMMENTS 2009 12 22 FINAL.doc

DEC 23 REC'D

INDEPENDENT REGULATORY
REVIEW COMMISSION

ARIPPA HEREBY SUBMITS its Official COMMENTS Concerning: Beneficial Use of Coal Ash Proposed Regulations (see attached)

ARIPPA COMMENTS: "Beneficial Use of Coal Ash" as published in the November 7, 2009 Pennsylvania Bulletin (<http://www.pabulletin.com/secure/data/vol39/39-45/2062.html>)

DATE: December 22, 2009

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

Subject: Beneficial Use of Coal Ash Proposed Regulations

Dear Environmental Quality Board:

ARIPPA's comments represent 13 environmentally beneficial, waste coal to alternative energy generating plants, approximately 5000 Commonwealth citizens directly or indirectly employed by the industry, and 10% of the total electricity generated in PA (PA total 1449 MW's or an average of 97MGW per plant)

ARIPPA, on behalf of its member companies, hereby provides comments on PADEP's (Bureau of Mining and Reclamation) Beneficial Use of Coal Ash Proposed Regulations. ARIPPA appreciates this opportunity to comment.

PLEASE NOTE: This email is confidential and may well also be legally privileged. If you have received it in error, you are on notice of its status. Please notify me immediately by reply email and then delete this message from your system. Please do not copy this email for any purpose, or disclose its contents to any other person; to do so could be a breach of confidence. Thank you for your co-operation. Jeff A McNelly

Jeff A McNelly, ARIPPA Executive Director
2015 Chestnut Street, Camp Hill, PA 17011
phn 717 763 7635 fax 717 763 7455
cell 717 319 1457
jamcnelly1@arippa.org office@arippa.org
www.arippa.org



2808

RECEIVED

DEC 23 REC'D

INDEPENDENT REGULATORY
REVIEW COMMISSION

2015 Chestnut Street Camp Hill PA 17011

Phone: 717 763 7635, Fax: 717 763 7455 Cell: 717 319 1457

Email: jamcnelly1@arippa.org, Alt Email: office@arippa.org Web: www.arippa.org

ARIPPA COMMENTS: "Beneficial Use of Coal Ash" as published in the November 7, 2009 *Pennsylvania Bulletin* (<http://www.pabulletin.com/secure/data/vol39/39-45/2062.html>)

DATE: December 22, 2009

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

Subject: Beneficial Use of Coal Ash Proposed Regulations

Dear Environmental Quality Board:

ARIPPA's comments represent 13 environmentally beneficial, waste coal to alternative energy generating plants, approximately 5000 Commonwealth citizens directly or indirectly employed by the industry, and 10% of the total electricity generated in PA (PA total 1449 MW's or an average of 97MGW per plant)

ARIPPA, on behalf of its member companies, hereby provides comments on PADEP's (Bureau of Mining and Reclamation) Beneficial Use of Coal Ash Proposed Regulations. ARIPPA appreciates this opportunity to comment.

Table of Contents:

- Introduction-Salutations ...p1
- I. Historical significance and background: ...p 1-2
- II. Description of ARIPPA Member Facilities: ...p 2
- III. General Comments: ...p 3-9
General Comments Summary p 9
- IV. Suggested Amendments/Specific Comments...p 10-27

I. Historical significance and background:

For nearly two centuries coal has been mined in Pennsylvania. Coal mining operations continue today and will likely continue for at least another century in Pennsylvania. In the past, coal that was very low in heat content (BTU's) and accordingly undesirable in the marketplace was randomly discarded all across Pennsylvania's landscape. 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 the Commonwealth'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 and private 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 PADEP. Accordingly we ask and appreciate your special attention to our industry, its comments, and concerns for the future of Pennsylvania.

II. Description of ARIPPA Member Facilities:

ARIPPA is a trade association comprised of thirteen (13) waste coal-fired electric generating plants located in both the anthracite and bituminous regions of Pennsylvania. ARIPPA's member facilities constitute the overwhelming majority of the waste coal power production industry in the world and generate 10% of the total electricity generated in PA. Approximately 5000 Commonwealth citizens are directly or indirectly employed by the industry. Each of the ARIPPA member facilities uses a stationary circulating fluidized bed ("CFB") waste coal-fired boiler that generates electricity for sale at a minimum capacity of more than 25 MWe. 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 with no ability to "pass on" increased operational or environmental compliance costs on to rate payers or consumers.

The 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 Pennsylvania 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 Pennsylvania.

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, PADEP (Bureau of Mining and Reclamation) consider the following factors as they review our comments on the proposed regulations:

- The unique nature of the CFB CLEAN COAL technology employed by the ARIPPA member plants
- The direct and indirect employment of thousands of citizens
- The generation of alternative energy collectively exceeding 10% of the Commonwealth's generation
- 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.
- The environmental benefits provided to the Commonwealth...reclaiming abandoned strip mines (through the beneficial use of ash) and minimizing acid mine drainage from waste coal piles

III. General Comments:

ARIPPA does not oppose the promulgation or implementation of effective needed regulations to ensure the adequate protection of human health and the environment within the Commonwealth. However, ARIPPA requests that the application of all proposed regulations be timely, equitable and consistent, and not unduly burden the beneficial waste-coal to alternative energy industry activities. Unfortunately the newly proposed regulations concerning beneficial use of ash do not meet these criteria; accordingly ARIPPA is opposed to the adoption of such regulations at this time. (our reasoning is outlined below)

Nonetheless ARIPPA has also submitted comments specifically outlined in the last section of this document so that the Department has a clear understanding of specific industry concerns that will, if adopted, improve the proposed regulations.

ARIPPA's opposition outlined:

A. Misguided motivation

The draft regulations propose significant new requirements relating to the beneficial use of coal ash, as well as the storage of coal ash, whether or not intended for beneficial use. A review of the Departments preamble reveals that the motivation for these proposed regulations appears to be based on and prompted by the new "national attention to ash" based on the 2006 National Academy of Sciences' Study, and the Martins Creek, Pennsylvania and Kingston, Tennessee ash impoundment breaches.

On March 6 2009 PADEP's published the following summary to its proposed new beneficial use ash regulations:

"Recently, there have been many news stories involving mishaps with coal ash. Most notable are the Tennessee Valley Authority's coal ash impoundment failure in Roane County, Tennessee, where over five million cubic yards of ash spilled into the Emory River and the Gambrills, Maryland, site where private wells were contaminated due to ash placement. In August 2006 Pennsylvania had its own mishap with coal ash when a leak in an impoundment at the Martins Creek Steam Electric Station, in Northampton County, released 100,000,000 gallons of water and fly ash to the surrounding area and into the Delaware River. Fortunately, a thorough study found no adverse impacts to the river, wildlife or human health. Although none of these cases involved beneficial use of ash as defined by Pennsylvania law or were subjected to the restrictive criteria imposed in Pennsylvania for beneficially used ash, these stories have raised the level of public awareness and concern on the storage, disposal and beneficial use of coal ash.... the Department is proposing a targeted rulemaking focused on the storage and beneficial use of coal ash in order to move expeditiously on coal ash issues"

A review of these motivations reveals some basic flaws in the Departments interpretations, timing, and bases to develop and propose new regulations:

1. In the 2006 National Academy of Sciences' Study *Managing Coal Combustion Residues in Mines* (THE NATIONAL ACADEMIES PRESS Washington, D.C.) www.nap.edu the committee (NAS) concluded on page 153-154 as follows: "The committee recommends that enforceable federal standards be established for the disposal of CCRs (coal combustion residue's) in minefills to ensure that states have specific authority and implement adequate safeguards.

There are three primary regulatory mechanisms that could be used to develop enforceable standards that would reduce the risks imposed by CCR minefilling:

- Changes to SMCRA regulations to address CCRs specifically;
- Joint OSM-EPA rules pursuant to the authority of SMCRA and RCRA; or
- RCRA-D rules that are enforceable through a SMCRA permit."

The study does not suggest that each state (currently regulating beneficial use of ash) or specifically the Commonwealth should rewrite their current regulations. Conversely the study clearly emphasizes the outstanding performance of the Commonwealths current beneficial use efforts and regulations: "Ohio and Pennsylvania have monitoring requirements for CCRs that are substantially greater than SMCRA requirements"...and "Some states, such as Indiana and Pennsylvania, specifically require monitoring for particular CCR parameters.p138" "Therefore, the committee recommends that secondary uses of CCRs that pose minimal risks to human health and the environment be strongly encouraged....'Government agencies should examine ways in which they can promote CCR use or remove impediments to its use" p4 and p148

Page 43 of the NAS Study clearly outlines why the committee felt strongly that government agencies should examine ways in which they can promote CCR use or remove impediments to its use. PA's current "model" regulated approach has produced environmental benefits as well as employment, alternative energy and a vast savings to the Commonwealth citizens.

"It is estimated that the acid leached from the coal refuse in these abandoned coal mines in Pennsylvania contributed to the degradation of more than 3,100 miles of streams. Pennsylvania's Bureau of Abandoned Mine Reclamation estimates the cost to eliminate these abandoned mine problems to be \$14.6 billion. Pennsylvania receives an average of \$30 million annually from the Office of Surface Mining (OSM) Abandoned Mine Lands (AML) fund; at this rate, it would take Pennsylvania nearly 500 years to complete the cleanup of its AML sites. The advent of FBC technology in the late 1980s enabled the once-useless coal refuse to be used as fuel. The FBC plants' ability to use the coal refuse as fuel, coupled with the potential to place the CCRs into nearby mines, makes the arrangement economically viable and has enabled privately funded reclamation of 3,400 acres of AML as of 2002. An example of this cost offset is the Big Gorilla Project (Sidebar 2.7), which has currently cost the Pennsylvania Department of Environmental Protection (PADEP) \$4.5 million; without the independent power producers, this project would have cost the state an estimated \$80 million (National Mining Association, Washington, DC, written communication, July 2005). SOURCE: Pennsylvania's Department of Environmental Protection, (PADEP) 2004."p 43

The NAS study also outlines the many advantages of current beneficial use of ash: "Cementations fly ash is especially effective for such use, and FBC fly ashes have been shown to have sufficient bearing capacity for most post-mining uses. Underground mines may be sealed off to decrease the possibility of AMD from polluting the surface waters, to reduce the occurrence mine fires, or for the overall safety of the general public. Alkaline CCRs (especially FBC CCRs) can be used to neutralize existing acidity in groundwater (see Chapter 3). CCRs can also act as a seal to reduce the oxidation of pyrite in the coal spoil, thus slowing the rate of generation of additional AMD". P 46 "The main advantages of CCR mine placement are (1) it can assist in meeting reclamation goals (such as remediation of abandoned mine lands), and (2) it avoids the need, relative to landfills and impoundments, to disrupt undisturbed sites". p148

2. The unfortunate TVA ash accident http://www.tva.gov/kingston/photo_gallery/index.htm that occurred in December of 2008 was due to the breach or failure of a retention dam/pond wall...and has no logical comparison to the beneficial use of ash or the Commonwealths regulations.

The wet ash slurry impoundment that breached (failed) was located at/on the bend of a river. The ash accident spill in Tennessee has raised the need for regulatory improvements pertaining to wet impoundments...however such improvements are not applicable to the regulation of dry ashes produced by waste coal to alternative energy facilities. Accordingly it is unreasonable to make any comparison between the unfortunate TVA ash storage accident to dry CFB ash residue managed in a highly regulated, time tested (safely utilized for over 20 years) environmentally beneficial manner. A regulated effort that to date has reclaimed previously mine damaged lands and streams.

3. ARIPPA is concerned that the Departments motivation to propose regulations is based on "political media appeasement" versus scientific fact. The proposed changes to beneficial use regulations are not based on actual consequences of current regulations, practices or data...rather they appear to be motivate by an effort to placate critics of a process that has been demonstrated and recognized nationally as successful.

Even though PADEP has been recognized nationwide, as a model for regulating the use of ash residue (CCR's) in abandoned mine land reclamation activities, certain environmental activists' associations have criticized the Commonwealth agency. The lengthy, and questionably accurate report by the Clean Air Task Force published in July 2007 attempted to draw "persuasive" conclusions based on their interpretation of outlier data. More recently, the similarly alarmist report "Waste Deep" published by Earth Justice in 2008 alleges the practice of using CCR's in mine reclamation is a dangerous practice. Both documents represent efforts by special interests groups to indirectly implement their goal of eliminating all fossil-fueled power plants by attacking the use of CCR's in mining and other activities.

Questionable reports by the Clean Air Task Force published in July 2007 attempted to draw "persuasive" conclusions based on their interpretation of outdated data. More recently, the similarly alarmist report "Waste Deep" published by Earth Justice in 2008 alleges the practice of using CCRs in mine reclamation is a dangerous practice...without sound scientific basis. Both documents represent efforts by special interests groups to indirectly implement their goal of eliminating all fossil-fueled power plants by attacking the use of CCRs in mining and other activities.

- PA DEP Response to Clean Air Task Force Report: "Impact on Water Quality From Placement of Coal Combustion Waste in Pennsylvania Coal Mines"

Under the current Commonwealth regulatory format industry has had a 20-year performance record resulting in "no indication of ground water degradation to the placement of coal ash". One can only reasonably conclude that the Department is adopting a position to accept questionable unscientific alarmist reports and claims, written by special interest groups with known and published goals of riding our society of fossil fueled power plants. ARIPPA would prefer that federal and state regulation of ash be based on unbiased, scientifically based historic data, and findings.

The proposed changes to these regulations do not appear to be based on any actual negative consequences of current practices or regulations. Accordingly, any proposed changes to the regulations should address acknowledged shortcomings based on scientific evidence...and not be changed to simply create a more costly and restrictive process that satisfies the whims of special interests groups at the expense of the recognizable rewards the use of beneficial ash has to date produced

B. Improper timing and development:

1. ARIPPA believes that the timing and expedient development of these proposed regulations is unwise and unnecessary.

The sudden unnecessary "rush to action" regulatory approach may produce overly burdensome and unnecessary regulations that may prove to be ineffective. ARIPPA believes that proposing new regulations is properly motivated and necessary when scientifically based truths reveal that current regulations are inadequate to address such truths. Such is not the case with these proposed extremely costly new regulations. Our regulated industry has had a 20 year performance record resulting in "no indication of ground water degradation to the placement of coal ash"...and a perfect of adherence to "model" regulations... how does our industry improve upon such a perfect record? Accordingly these newly proposed regulations represent a clear example of costly government over-regulation of current time tested sound industry methods.

EPA is at this time conferring with other Federal entities such as OSM to draft federal regulations as suggested in the 2006 NAS study. In a New York Times interview on March 6, 2009 Matt Hale the Director of EPA's Office of Resource Conservation and Recovery, indicated that: "We're committing to develop a regulatory proposal for comment by the end of this (2009) calendar year."

Accordingly PADEP's "move expeditiously" approach ignores NAS directives and the pending EPA ash regulations that have been slated to be published later this year (2009)...and may very well put the Department and industry into the extremely costly position of completely re-writing these regulations, and completely revamping management plans concerning CFB ash beneficial use, placement, and monitoring requirements Accordingly ARIPPA believes that it is foolish to propose and adopted regulations in the Commonwealth at this time...knowing that they may all become moot within a short period of time.

PADEP's hurried motivation, in this case, to draft and implement proposed regulations is both questionable and unreasonable given the exemplary scientifically-based results (20 years of data and monitoring) of this specifically regulated substance and activity. PADEP's approach to "move expeditiously" included the recent adoption of ash guidelines which were implemented without any published response to our industry comments (or we assume the comments of countless others). Accordingly the Department's position and reasoning concerning such guidelines and comments remain unknown and unpublished. And yet the latest proposed regulations:

1. More than double industry costs including fees, bonding, and water monitoring.
 2. Do not allow for a clear, fair transition, "grand fathering", or treatment of existing beneficial use ash procedures/sites still in process or completed within the past (10 years plus potentially).
2. It is illogical to draw any conclusion from the NAS study or the TVA accident that CFB ash has in any way changed in composition or should be handled in any different manner from its current regulated beneficial use.

The NAS study specifically states: "EPA has not identified any cases in which exceedances in water quality standards could be attributed directly to CCR mine placement.p87

- EPA concluded that regulation was warranted under either RCRA or SMCRA or some combination.p89
- In 2000, EPA published a regulatory determination on wastes from the combustion of fossil fuels (65 FR 32214) and concluded that CCRs do not warrant regulation under subtitle C (hazardous waste) of RCRA.p101
- EPA further justified its choice of subtitle D regulation by noting that it did not want to place any unnecessary barriers on the beneficial reuse of CCRs and the consequent environmental benefits associated with such reuse.p102
- The U.S. Environmental Protection Agency (EPA) has not specifically attributed significant environmental problems to CCR use in minefills.p147"

C. Current ash beneficial use regulations are "EFFECTIVE"

On November 9, 2007 PADEP in response to a highly questionably unscientific report by the Clean Air Task Force made the following written comments:

- PA DEP Response to Clean Air Task Force Report: "Impact on Water Quality From Placement of Coal Combustion Waste in Pennsylvania Coal Mines"
- "In the mid-1980s, the Pennsylvania Department of Environmental Protection began to approve coal ash utilization for mine reclamation. Twenty-one different parameters are used to assess the dry ash composition and the leachate characteristics. If an ash exceeds the limits, it cannot be used beneficially and must be disposed in a lined facility.
- Pennsylvania is employing a variety of approaches to address this legacy; among them is the beneficial use of coal ash. This approach has resulted in an effective program in which coal ash has been used to safely reclaim mine sites".
- "Because the main beneficial use for coal ash has been placement at mine sites for reclamation, it is imperative to understand the environment into which the material is placed. Foremost, one must recognize the historical legacy discussed above. The surface water and groundwater in the coal regions can be severely impacted by acid mine drainage (AMD). AMD renders the local groundwater undrinkable and regional streams hostile to native aquatic life. Common characteristics of mine drainage are low pH (<6.0, frequently as low as 3.0); high concentrations of metals such as iron, manganese, aluminum, lesser concentrations of zinc, nickel, selenium and other metals; and high concentrations of sulfate. Iron, manganese and aluminum can be at concentrations in tens of parts per million, and occasionally over 100 parts per million. The other metals can occur up to a few parts per million. Sulfate is typically hundreds to thousands of parts per million. But, not all mine drainage is acidic and not all has high metals.
- The environment for ash placement typically consists of abandoned mine features such as coal refuse (waste coal or rock associated with coal) piles, and mine pits and underground workings – areas that are often polluted by mine drainage. These features provide a means by which precipitation and clean

surface waters can become polluted by interacting with acid-producing minerals to generate more AMD. Through the use of coal ash (CCR's) these old mines can be restored to productive land and **reduce** the amount of pollution coming from the old mines. Many of the sites reclaimed with coal ash would not likely be otherwise reclaimed.

- Most of the allegations made by the CATF in its report are a rehash of issues raised by CATF associates in the past. These have been time after time examined through Department investigations and found to be erroneous. The CATF is an advocacy organization that had stated its opposition to the beneficial use of coal ash combustion products repeatedly to the public prior to the investigations documented in their report. This response to the CATF report demonstrates, once again, that the CATF allegations of pollution from ash are seriously flawed.”

On March 10, 2009 Keith Brady, Bureau of Mining and Reclamation, Division of Permits PADEP wrote in response to an ACAA inquiry:

“Despite claims to the contrary, we have not seen pollution from beneficially used ash. Last year PA used over 11 million tons of ash in the mining program. With the amount that’s been used for mine reclamation in PA, if it were going to pollute we should be seeing pollution. We aren’t.”

- Coal Ash Beneficial Use in Mine Reclamation and Mine Drainage Remediation in Pennsylvania

On April 10, 2009 Thomas Fidler, PADEP Secretary Waste, Air and Radiation Management in a letter to EPA wrote:

“Since 1985 DEP has provided oversight on the use of the beneficial use of coal ash for mine reclamation and other uses. In 1992, Pennsylvania implemented regulations governing the management of coal combustion wastes covering storage, disposal and beneficial use. Under those regulations and oversight coal has been successfully used for mine reclamation throughout the Commonwealth. Through our groundwater monitoring program and data collected at reclamation sites, we have found no indication of ground water degradation attributable to the placement of coal ash. In addition to coal ash DEP regulates other coal combustion wastes, such as flue gas desulfurization (FGD) sludge and gypsum, and requires permits prior to the beneficial use of these wastes.

PADEP, Penn State University, and University of North Dakota studies and conclusions continue to establish that current regulated practices are the most comprehensive and dependable in the country ...sound...even “model”:

- 2007 Tera D. Buckley Marketing Research Specialist University of North Dakota Energy & Environmental Research Center for EPA report conclusions: “Pennsylvania’s estimated 60%–70% CCP utilization rate is due largely to the fact that CCP use in mining applications is defined as a beneficial use in Pennsylvania, unlike many other states that consider it to be disposal. PA DEP residual waste coal ash beneficial use regulations and program implementation policies are perhaps the most comprehensive and dependable in the country, particularly for abandoned mine reclamation. These regulations coupled with the state’s 14 CFB power plants successfully using CCRs in mine applications make Pennsylvania a model state for the use of CCRs in mine applications.”
- May 2009 The American Coal Ash Association “The CCP industry has considered Pennsylvania to be a model state for beneficial use of CCRs in mining activities. Based on your work with Penn State University, the Department of Energy, electric utilities and others, the thoughtful and technically comprehensive process of using ashes from waste coal burning facilities has resulted in many successes within the Commonwealth. In fact, the National Academy cited a number of benefits of using FBC ashes produced from the burning of waste coals piles in their 2006 report. “...”In conclusion, we believe that Pennsylvania’s current regulations largely address the proper management and beneficial use of CCRs. Any proposed changes to the regulations should address acknowledged shortcomings and not be changed just to be more restrictive of a process that is working well.”

D. The proposed regulations will require new vastly increased industry and governmental costs

- The process to obtain approval will now require... 4 samples within the past year for initial approval... twelve background samples from each monitoring point to establish pre-ash groundwater conditions (monthly water quality background samples for one year prior to placement of coal ash)...approx six new parameters to be analyzed, including fluoride, each with maximum acceptable leachate concentrations...and a minimum of 1 up gradient and 3 down gradient water quality monitoring points
- Adds costly deed and landowner notices including giving local authorities an unlimited time frame to comment on ash placement
- Water quality monitoring, bonding, and an annual “permit filing fee” of \$2000 payable to the Department is proposed to be required for 10 years after final placement of coal ash: Quarterly monitoring up to a minimum of 10 years (the Department can require a longer indefinite monitoring period if it so desires).
- PADEP utilizes coal ash in its own publicized reclamation activities. ARIPPA assumes that the Commonwealth/Department will likewise experience vastly increased costs to adhere to their own “expeditiously” drafted guidelines.

E. The draft regulations do not distinguish among the various types of coal combustion by-products based on the combustion and control technologies.

CFB waste coal to alternative energy ash is unique...yet the guidelines do not include a definition or specific regulatory distinctions for CFB ash beneficially used, including approval, placement, isolation distance from groundwater, and monitoring requirements:

- PADEP's November 9, 2007 comments: “(CFB) Coal ash is also a low-permeability, high-alkaline material that can be transported in large quantities...Ash is often returned to the area from which the coal refuse was extracted, thus substituting an alkaline material for an acidic material.”
- PADEP's April 6th 2009 PA Bulletin Bureau of Mining and Reclamation DOCUMENT NUMBER: 563-2112-225 TITLE: Mine Site Approval for the Beneficial Use of Coal Ash INTERIM FINAL INTRODUCTION states: “Coal ashes vary considerably in their chemical and physical properties depending on the fuel source, the combustion technology used, air pollution control practices, and ash handling procedures. These factors must be carefully weighed when evaluating the appropriateness of using a particular coal ash for a specific purpose at a given site. A use, such as alkaline addition, that is appropriate for a highly-alkaline, pozzolonic ash from a Fluidized Bed Combustion (FBC) boiler may be inappropriate for a neutral-pH ash from a conventional coal boiler. Both ashes may have legitimate beneficial uses at mine sites, but it is not a given that they are interchangeable. For example, the isolation distance from groundwater may be a far more important consideration for a coal ash with high permeability as compared to a low permeability ash.”

All of the peer-reviewed and regulatory agency research conducted and presented to the U.S. Environmental Protection Agency, the Office of Surface Mining, and the National Academy of Sciences between 2000 and 2008 has confirmed that no environmental damage has resulted from the placement of CFB ash in abandoned coal and non-coal mines. Further, neither EPA nor any other regulatory agency found the claims of the alleged damage claims relating to placement of CFB ash in any other settings to be credible. Despite this, there is no attempt in the draft regulations to distinguish between CFB ash and other coal combustion byproducts, either through separate provisions for CFB ash or variance provisions specifically aimed at CFB ash.

F. The draft regulations do not appear to clearly differentiation between implementation at capped/completed sites, existing operational sites, and future sites.

Of special concern is the situation where the beneficial use of coal ash has previously been approved under a mining activity permit. In particular, the new water quality monitoring requirements may require substantial redesign of existing monitoring systems.

GENERAL COMMENT SUMMARY

ARIPPA does not oppose the promulgation or implementation of effective needed regulations to ensure the adequate protection of human health and the environment within the Commonwealth. However, ARIPPA requests that the application of all proposed regulations be timely, equitable and consistent, and not unduly burden the beneficial waste-coal to alternative energy industry activities. Unfortunately the newly proposed regulations concerning beneficial use of ash do not meet these criteria; accordingly ARIPPA is opposed to the adoption of such regulations at this time.

ARIPPA member plants have established a successful and unblemished regulatory adherence track record that includes tax-free assistance in the effort to clean-up environmental problems associated with abandoned mine sites. Further, our reported and published industry data demonstrates that CFB ash used in mine land reclamation has had a positive impact on the environment and mine land/stream reclamation. We believe the proposed regulations vastly exceed what is necessary to insure that many of the concepts raised by the NAS Study are addressed in a timely national format. The proposed Department regulations make significant changes that are not needed, and/or impose significant industry costs to be absorbed by an industry largely unable to pass such costs on to the electric ratepayer. Accordingly the proposed regulations almost assuredly will hinder or eliminate any new development of waste coal to alternative electricity plants

Accordingly ARIPPA is opposed at this time to the adoption of newly proposed regulations concerning Beneficial Use of Ash that:

- Are motivated by erroneous allegations or “media based awareness” that are neither factual nor based on sound scientific factors or societal needs
- Are statewide in scope only and proposed in advance of pending federal regulations. Once federal regulations are developed that allow for the continued use of ash as a non-hazardous product that may be beneficially used (including minefilling), ARIPPA would, at the appropriate time, be willing to work with the Commonwealth to develop changes or clarifications to statewide Beneficial Use of Ash regulations that are in line with federal regulations.
- Are lacking in differentiation between CFB ash characteristics-management and other coal ashes
- Unnecessarily double industry costs including new fees, bonding, and water monitoring
- Do not allow for a clear, fair transition, “grand fathering”, or treatment of existing beneficial use ash procedures/sites still in process or completed within the past (10 years plus potentially).

IV. Suggested Amendments/Specific Comments: (KEY FORMAT: Red bold and strike-through indicates language in the current proposed regulations that ARIPPA feels should be omitted. Blue bold and underlined indicates language in the current proposed regulations that ARIPPA feels should be inserted or added...Blue and not bold or underlined indicates ARIPPA's reasoning for such changes.

ARIPPA will base the majority of its specific comments on the following NAS study finding: Placement of CCRs in mines as part of coal mine reclamation may be an appropriate option for the disposal of this material...However, an integrated process of CCR characterization, site characterization, management and engineering design of placement activities, and design and implementation of monitoring.

ARIPPA feels the following reasoning/wording should be incorporated or added to the regulations at various appropriate locations within the proposed regulations:

- Clear language to allow for a clear, fair transition, "grand fathering", or treatment of existing beneficial use ash procedures/sites still in process or completed within the past (10 years plus potentially). The relevant aspects of the mining and waste management regulatory programs should be carefully integrated to avoid the imposition of requirements that will discourage the beneficial use of coal ash while achieving incremental environmental benefits.
- Separately define or recognize CFB ash. Regulations should distinguish between CFB ash and other coal combustion byproducts, either through separate provisions for CFB ash or variance provisions specifically aimed at CFB ash beneficial use, approval, placement, and monitoring
- Address mixing and/or blending of waste coal with other approved alternative sources: mixing of waste coal (Anthracite or Bituminous from various sources is common...and needs to continue to be an available practice (relative consistency); blending of waste coal with biomass and other sources should be encouraged by PADEP (Mod25...outlined in recently adopted PADEP General Permit) and should be allowed without expensive barriers

ARIPPA feels the following terms/wording should be struck at various appropriate locations within the proposed regulations: "~~there under~~" and "~~culm~~" ...both terms cause readers some confusion. "Culm" is a regional slang term and often used in a redundant fashion. Waste coal or coal refuse are both preferred non-regional terms... "There under" appears to be a redundant term.

§ 287.1. Definitions

The following words and terms, when used in this article, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Coal ash—Fly ash, bottom ash or boiler slag resulting from the combustion of coal, that is or has been beneficially used, reused or reclaimed for a commercial, industrial or governmental purpose. The term includes ~~[such]~~ the materials that are stored, processed, transported or sold for beneficial use, reuse or reclamation. For purposes of this article, the term also includes fly ash, bottom ash or boiler slag resulting from the combustion of coal, that is not and has not been beneficially used, reused or reclaimed for a commercial, industrial or governmental purpose.

Structural fill—the engineered use of coal ash as a base or foundation for a construction activity that is completed promptly after the placement of the coal ash, including the use of coal ash as backfill for retaining walls, foundations, ramps or other structures. The term does not include valley fills or the use of coal ash or solid waste to fill open pits from coal or noncoal mining.

The only use of the term structural fill was related to the beneficial use of coal ash and the existing language should be retained. This language was included based on the first report to Congress by EPA regarding the management of coal combustion residues and agreeing that a structural fill was a beneficial use of coal ash.

Water table—

~~[(i) The top of the saturated zone.~~

~~(ii) The term includes the regional groundwater table, perched water tables, seasonal high water table and the surface of mine pools.]~~

ARIPPA is concerned with the alterations proposed to the definition of water table. ARIPPA feels the existing language should be retained and the proposed changes dropped. These changes may have been proposed and adopted as a “fix” to placate certain environmental association concerns, but the changes would negatively affect all generators of residual waste and how they are being managed. Accordingly these changes are beyond the scope of beneficial use of ash regulations.

* * * * *

CFB Coal ash—Coal ash resulting from a process which utilizes Circulating Fluidized Bed technology and which utilizes coal, waste coal, or coal refuse as the primary energy source in conjunction with limestone.

The NAS Study suggests that placement of CCR’s in mines as part of coal mine reclamation may be an appropriate option for the disposal of this material...However, an integrated process of CCR characterization, site characterization, management and engineering design of placement activities, and design and implementation of monitoring.

Accordingly ARIPPA feels a separate definition which outlines the uniqueness of CFB residue (ash or CCR) is warranted in order to recognize and properly regulate CFB ash. The proposed regulation of ash including its beneficial use, approval, placement, and monitoring do not recognize the specific characterization differences between ash and CFB ash. The regulations should distinguish between CFB ash and other coal combustion byproducts, either through separate regulatory provisions for CFB ash or through exemption/variance provisions incorporated throughout Chapter 290 (and within these proposed regulations). ARIPPA is offering the definition above as a beginning to a process that would necessitate the alteration of the beneficial use regulations to include CFB coal residue as meeting the definition of “coal ash” when appropriate in many subchapters while at the same time (in other subchapters) be differentiated from coal ash.

§ 290.1. Scope

(a) This chapter sets forth requirements for beneficial use of coal ash.

(b) If coal ash is mixed with residual waste ~~[or ash produced by co-firing coal or waste coal with an alternative fuel]~~, the beneficial use must be authorized by a permit issued under this article and the requirements of this chapter must be met.

(c) Ash produced by co-firing coal or waste coal with an alternative fuel approved by the Department that represents 20% or less of the heat input to the boiler shall be treated as coal ash and may be beneficially used in accordance with the requirements of this chapter. If ash is produced by co-firing coal or waste coal with an alternative fuel that represents greater than 20% of the heat input to the boiler, beneficial use of such ash must be authorized by a permit issued under this article and the requirements of this chapter must be met.

This language allows the ash to be treated as beneficial if it meets the requirements of subchapter c of chapter 290. It is treated as coal ash only in this instance. This would allow the Department to issue approvals under 290 without going to a general permit.

(~~cd~~) If coal ash is mixed with construction and demolition waste, the beneficial use must be authorized under a permit issued under Article VIII (relating to municipal waste) and the requirements of this chapter must be met.

Regulations need to better address mixing and/or blending of waste coal with alternative sources. Mixing of waste coal (Anthracite or Bituminous from various sources is common...and needs to continue to be an available practice (relative consistency)

Blending of waste coal with biomass and other sources, which differs from mixing various wastes, is an additional area that should be encouraged by PADEP (SEE Mod25...outlined in recently adopted PADEP General Permit and recent Climate Change Advisory Comments) and should be allowed without expensive or unreasonable barriers

§ 290.101. General requirements for the beneficial use of coal ash

(d) A water quality monitoring plan in accordance with § 290.301 (relating to water quality monitoring) and, if applicable, Chapters 86—90 must be developed and implemented if either more than 10,000 tons of coal ash per acre is to be used on a project or more than 100,000 tons of coal ash in total will be used at a project. Contiguous projects will be considered a single project for purposes of this section. The Department may require a water quality-monitoring plan for projects involving lesser quantities of coal ash where site conditions warrant. The Department may waive or modify this requirement for uses under § 290.106(b)(1)—(6).

(e) Coal ash may not be placed within 8 feet of the regional ground water table, unless the Department approves placement within 8 feet at a coal mining activity site based upon a demonstration that groundwater contamination will not occur.

It is scientifically unfounded for the Department to propose that a water quality-monitoring plan be required solely on the basis of the amount of coal ash proposed to be beneficially used at a site. Either some form of monitoring should be required at all sites (consistent with the mining activity regulations), or monitoring requirements should be imposed on a site-specific basis. (See NAS study)

The draft prohibits the placement of ash within eight (8) feet of the water table, as opposed to within eight (8) feet of the regional groundwater table, as is contained in the current beneficial use regulations in Subchapter H of Chapter 287. Without a definition of “water table,” it appears that the proposed provision is unreasonably more restrictive than the current requirement.

§ 290.102. Use of coal ash as structural fill

(a) At least 60 days before using coal ash as structural fill, the person or municipality proposing the use shall submit a written notice to the Department. The notice must contain, at a minimum, the following information:

(6) A signed statement by the owner of the land on which the structural fill is to be placed, acknowledging and consenting to the use of coal ash as structural fill.

~~—[(7) The statement by the landowner in paragraph (6) shall be a recordable document for any project, or set of contiguous projects involving placement of more than 10,000 tons of coal ash per acre. Prior to beneficial use of more than 10,000 tons of coal ash per acre under this section, the statement by the landowner shall be recorded at the office of the recorder of deeds in the county in which the proposed coal ash beneficial use will take place.]~~

The requirement that the landowner’s consent to the use of coal ash be recorded appears for the first time in subsection (a) (6) (7). The inclusion of this requirement here and other sections dealing with beneficial use of coal ash is inconsistent with the notice/acknowledgement requirements in the Solid Waste Management Act, the Hazardous Sites Cleanup Act, and the Land Recycling and Environmental Remediation Standards Act, as coal ash that is beneficially used in accordance with the Department’s regulations is not waste.

This also seems like an unneeded expense if the ash owner and site owner is the same person/company. If this requirement is to be included, it should be coordinated with other landowner consents to mining activity in a single document to avoid expense and confusion regarding permissible mining activities at a site...or one entry on the deed would be sufficient to ‘notify’ any future property owner

This seems to be an unnecessary expense/step/hurdle for industry especially when ash placed often actually improves the quality of the area where it is being placed.

(d) For coal ash to be beneficially used as a structural fill, the following additional requirements must be satisfied:

(1) The pH of the coal ash as placed must be in the range of 6.0 to ~~[9.0]~~ 12.5, unless otherwise approved by the Department. Lime or limestone may be added to raise pH.

(7) Coal ash must achieve a minimum compaction of 90% of the maximum dry density as determined by the Modified Proctor Test, or 95% of the maximum dry density as determined by the Standard Proctor Test. Ash from each source shall be tested individually. The Proctor Test shall be conducted by a certified laboratory.

Subsection (d) limits the pH limitation of coal ash to a range of 6.0-9.0. As noted above, this requirement should be modified for CFB ash without the necessity of seeking a variance under draft Section 290.201

Subsection (d) (7) requires that the Proctor density test be performed by a certified laboratory. This is a physical test, and it does not appear that such testing is within the ambit of the Environmental Laboratory Accreditation Act. The draft regulations should clarify the identity of the certifying body for such testing.

~~(f) Prior to January 31, any person that placed more than 10,000 tons of coal ash per acre at any project or contiguous projects in the previous calendar year shall submit a report for the previous year to the Department that includes contact information, the location of the site where the coal ash was utilized, the identity of each source of coal ash, and the volume in cubic yards and the weight in dry tons for each source.~~

The Department should consider the deletion of the annual reporting requirement in subsection (f), or, at the very least, reduce it to a biennial report. ARIPPA feels that such reporting is redundant to quarterly reports currently submitted to the Department. Accordingly the Department should assess whether this additional reporting requirement is duplicative of other reporting requirements.

This entire subsection allows the revocation of coal ash certification if the ash "consistently exceeds the qualification criteria." This is too subjective a basis. Instead, the criteria in Section 290.103 should be applied

§ 290.103. Use of coal ash as a soil substitute or soil additive

(a) Coal ash may be beneficially used as a soil substitute or soil additive without a permit from the Department under the act if the person proposing the use complies with this section.

The requirements of the former Section 287.662(c) (4)-(9) of current regulations should be incorporated in the proposed draft regulations.

(d)(3) Surface runoff from the project area shall be controlled during the project. Storm water shall be managed in accordance with The Clean Streams Law (35 P.S. §§ 691.1—691.1001) and the regulations promulgated ~~thereunder~~.

(4) Diversion ditches, terraces and other runoff control structures may be utilized to control erosion on the disturbed area of the project.

(5) The person or municipality conducting the activity shall have a Department-approved erosion and sedimentation control plan under Chapter 102 (relating to erosion control).

(6) Coal ash may not be applied to soil being used for agriculture where the soil pH is less than 5.5

(7) Coal ash may not be applied if resultant chemicals or physical soil conditions would be detrimental to biota.

(8) The offsite dispersion of dust from coal ash and other materials shall be minimized.

(9) Coal ash may not be placed in contact with the seasonal high water table.

(10) Coal ash may not be placed within 8 feet of the regional groundwater table.

(11) Coal ash may not be used in a way that causes water pollution.

(4-12) Coal ash shall be incorporated into the soil....

Since CFB ash generally raises pH values due to high alkalinity, it would seem that low soil pH would be one of the places land spread applications might be useful. Consequently the logic of scientific reasoning does not appear to be the basis for this requirement...and or lack of recognition of CFB ash characteristics.

§ 290.104. Beneficial use of coal ash at coal mining activity sites

(a) *Coal ash approval at coal mining activity sites.* Approval for the beneficial use of coal ash at coal mining activity sites as defined in § 86.1 (relating to definitions) will, at a minimum, be based on the following:

~~(3) A signed statement by the owner of the land on which the coal ash is to be placed, acknowledging and consenting to the placement of coal ash. This statement by the landowner shall be a recordable document. Prior to beneficial use of coal ash under this section, the statement by the landowner shall be recorded at the office of the recorder of deeds in the county in which the proposed beneficial use of coal ash will take place.~~

(4 3) A **water quality-monitoring** plan that meets the requirements of Subchapter D (relating to water quality monitoring)

This is a redundant requirement (refer to mining permits) See comments relating to Section 290.102(a) (7). This separate and redundant requirement should be deleted...rather it should be coordinated with other landowner consents to mining activity in a single document to avoid expense and confusion regarding permissible mining activities at a site. Ash placement is all publicly recorded with the PADEP and industry bonds the areas that are being filled. This seems to be an unnecessary step or hurdle for industry when CFB ash actually improves the quality of the area it is being placed

~~(c) *Permit filing fee.*~~

~~(1) A nonrefundable permit filing fee payable to the "Commonwealth of Pennsylvania" for the beneficial use of coal ash at a coal mining activity site is to be paid annually in the amount of \$2,000. This annual filing fee is to be paid until final bond release for the coal mining activity site.~~

~~(2) Money received from the permit filing fee for the beneficial use of coal ash will be deposited in the Surface Mining Conservation and Reclamation Fund and will be used by the Department for the cost of reviewing, administering and enforcing the requirements of the authorization for beneficial use of coal ash under the coal mining activity permit.~~

~~(3) The Department will review the adequacy of the fees established in this section at least once every 3 years and provide a written report to the EQB. The report will identify any disparity between the amount of program income generated by the fees and the costs to administer these programs, and contain recommendations to adjust fees to eliminate the disparity, including recommendations for regulatory amendments to adjust program fees.~~

According to the Departments publications Section 4(a) of SMCRA (52 P.S. §1396.4(a)» authorizes the Department to charge and collect a reasonable filing fee from persons submitting applications for a surface mining permit in order to cover the costs of reviewing and administering such permits. However the proposed "Annual permit filing fee" is excessive, based on several factors:

1. It must be paid until final bond release regardless of the amount of Department activity or costs/services involved
2. Appears to apply to each coal ash certification regardless of the amount of Department activity or costs.

The Departments published justification of the amount of the fee is as follows:

“The Department proposes to sample ash at a mine site an average of two times per year and collect water samples from an average five monitoring points two times per year”. The DEP Bureau of Laboratory's cost for analyzing ash is \$450 per sample and their cost for water sample analyses is \$314 per sample. The combined cost of ash sampling and water sampling per mine is \$4,040 per year. The coal-mining program is 50% federally funded. Thus the state portion of the sample costs is \$2020, which has been rounded to \$2000 per year.

In order for any fee the Department proposes to be reasonable and justified ARIPPA suggests that a report be developed and presented to the EQB in advance of proposing regulations that is based on the input from an unbiased 3rd party to determine actual costs and hours/labor involved to justify charging any type of fee (in light of Chapters 87 and 88 and tax revenues also).

Accordingly ARIPPA suggests the elimination of this annual fee in its entirety. Currently Chapters 87 and 88 address mining permits and activities, have significant and strict requirements and work in conjunction with SMCRA and OSM requirements and review. The Departments justification does not include any funding from the Commonwealth Budget (PA citizens tax dollars) Using “averages” as the basis for the Departments activity level and involvement is unjustified. Accordingly it is unreasonable and unjustified to charge each applicant the same fee annually when the Departments sampling activity may be well below “average”.

(f) *Additional operating requirements for the placement of coal ash at coal surface mining and coal refuse reprocessing sites.* The following applies to placement of coal ash at coal surface mining and coal refuse reprocessing sites:

(1) The volume of coal ash placed at the site may not exceed the volume of coal, coal refuse, culm or silt removed from the site by the active mining operation on a cubic yard basis unless ~~approved by the Department~~: **(i) an increased volume is needed to insure the reclamation plan is achieved, (ii) the abatement plan per Subchapter F of Chapter 87 and Subchapter G of Chapter 88 requires additional ash placement at the site (iii) the reclamation plan may include the use of coal ash and its associated rejects from waste coal generated at active mining operations if the use of these materials allows for the removal of marginally low quality waste coal in the existing coal refuse processing sites or (iv) it is part of an integrated multi-site refuse reprocessing operation per subsections 6 and 7 below.**

(2) Placement of coal ash shall be accomplished by mixing with spoil material or by spreading in horizontal layers ~~no greater than 2 to 4~~ feet thick unless otherwise approved by the Department. The reclamation plan of the approved mining permit must address the placement of the coal ash.

(3) The coal ash shall be spread and compacted within 24 to 72 hours of its delivery to the site unless stored in accordance with Subchapter E (relating to coal ash storage).

Concerning the 24 hrs...In the case where a plant sends the ash to a stockpile area on the mine site and it is transported from the stockpile to the mine site placement area; the Department should allow the ash to be stockpile for longer than 24 hours. Also the Department needs to account for Holidays, Fridays, and weekends

The requirement that the ash being delivered to the site must be at optimum moisture content is imposing additional expenses by imposing a requirement, which increases transportation costs. The key is for the ash to be spread and compacted within the optimum moisture content range. This can occur at the generator sites or at the mine placement site.

Subsection (f) (2) requires coal ash to be placed in two-foot lifts, unless otherwise approved by the Department. This is a significant departure from the current requirement that ash be placed in four-foot lifts, and it may not be feasible at some sites. (Site specific) Unless the Department can justify this departure, the current requirement should be retained, or the size of the lift should be established in the reclamation plan for the site...i.e. establish a range of 2 foot to 4-foot lifts.

The Mine Sites in the past have used neutron densiometer to conduct field measurements to insure that the compaction was being achieved and should be allowed to continue. (Further, the Mining Program has neutron densiometer equipment.) Proctor density test is a physical test, and it does not appear that such testing is

within the ambit of the Environmental Laboratory Accreditation Act. The draft should at least clarify the identity of the certifying body for such testing.

(5) The pH of the coal ash as placed must be in the range of 7.0 to 12.5. Lime or limestone may be added to raise the pH

(56) For coal refuse reprocessing sites where refuse material is presently deposited in large surface piles, the piles may ~~not~~ be rebuilt with coal ash. The placement of coal ash shall be accomplished in a manner that blends into the general surface configuration, and complements the surface drainage pattern of the surrounding landscape

These sections establish limitations regarding the amount of ash that can place on a site. While we recognize a need to control the amount of ash, we believe both the Department and the permittee need flexibility and a means to bring more coal ash back to a site.

The reclamation of marginal low quality waste coal at coal refuse processing sites would be further enhanced/encouraged with the allowed use in the reclamation project of coal ash and the associated rejects from waste coal generated at active mining operations. This approach more effectively utilizes natural resources that otherwise would be buried in strip mining operations and/or taken to other locations to build a new waste coal pile.

Subsection (f) (5), as proposed, establishes a precedent that states, "Must not be rebuilt". This statement has multiple interpretations including the term "must not" meaning no way and the term "rebuilt" possibly meaning no placement of coal ash on the property... to... may be allowing some ash, but limited in amount. To clarify this subsection (as well as subsection 6) we suggest language be amended to read:

"For coal refuse reprocessing sites where refuse material is presently deposited in large surface piles, the piles may be rebuilt with coal ash provided that the placement of coal ash shall be accomplished in a manner that blends into the general surface configuration, and complements the surface drainage patterns of the surrounding landscape, and further provide that additional or greater volume of coal ash may be placed at an individual site per paragraph 6 of this subsection or is needed to insure the reclamation plan is achieved and/or abatement plant under Subchapter F of Chapter 87 or Subchapter G of Chapter 88 is met."

The reclamation plan may include the use of coal ash and its associated rejects from waste coal generated at active mining operations if the use of these materials allows for the removal of marginally low quality waste coal in the existing coal refuse processing sites.

~~(6 7)~~ For a project involving multiple refuse reprocessing sites, the Department may allow a greater volume of coal ash to be placed at an individual site than the volume of coal refuse removed from that site if the following conditions are met:

- (i) A single person shall control a project involving the coordinated use of multiple coal refuse reprocessing sites.
- (ii) A reclamation plan is approved for each of the sites and each plan identifies the total cubic yards of coal ash that may be placed at each site.
- (iii) The total cubic yards of coal ash placed on the sites is less than the total cubic yards of refuse, Culm or silt removed from the sites. Only coal ash from the integrated project can be used.
- (iv) The integrated project shall be designed to achieve an overall improvement of surface water or groundwater quality at each site, where acid mine drainage is evident. If acid mine drainage is not evident, the project shall be designed to prevent degradation of the surface or groundwater quality.
- (v) The integrated project shall be accomplished in a manner that blends into the general surface configuration and complements the surface drainage pattern of the surrounding landscape.

(8) The coal ash may not be placed within 8 feet of the regional groundwater table unless the Department approves placement within 8 feet based upon a demonstration that groundwater contamination will not occur or that the Department approves this placement as part of a mine drainage abatement project.

(h) *Additional operating requirements for the beneficial use of coal ash at coal refuse disposal sites.*
The following apply to the beneficial use of coal ash at coal refuse disposal sites:

(1) Placement of coal ash as part of coal refuse disposal operations permitted under Chapters 86—90 must meet the following:

(i) The cubic yards of coal ash does not exceed the total cubic yards of coal refuse to be disposed based on un-compacted volumes of materials received at the site.

(2) The offsite dispersion of dust from coal ash and other materials shall be minimized.

Subsection (h) prohibits ash placement at coal refuse disposal sites in amounts that exceed the total cubic yards of coal refuse to be disposed. This issue should be addressed on a case-by-case basis (Site specific and or establish a range) in the reclamation plan for a site, as it may not be possible to reclaim a site without additional ash.

~~[(i) **Additional coal ash sampling.** A person using coal ash at a coal mining activity site shall, each quarter that coal ash is being used at the site, sample the ash after it has been placed at the site and such sample shall be analyzed in accordance with § 290.201(c)(5). The results of the analysis shall be submitted quarterly to and in the format required by the Department.]~~

NOTE: DELETE OR AMEND OPTION

(i) Additional coal ash sampling. A person using coal ash at a coal mining activity site shall, ~~each quarter~~ **every six months** that coal ash is being used at the site, sample the ash after it has been placed at the site and such sample shall be analyzed in accordance with § 290.201(c)(5). The results of the analysis shall be submitted **semi-annually** ~~quarterly~~ to and in the format required by the Department.

It is unclear why the Department is including a requirement in subsection (i) that coal ash placed at the mine site be sampled quarterly in accordance with draft Section 290.201(b)(5) and the results be reported to the Department. Such sampling is estimated to cost several thousand dollars annually and is unlikely to provide representative or meaningful results. The sampling required for certification purposes, coupled with the water quality-monitoring program, is more than adequate to address any concerns regarding coal ash quality. Or as an alternative this issue should be eliminated and addressed on a case-by-case basis (Site specific and or establish a range...we are showing above sample language to facilitate either approach)

ARIPPA suggests that the Department consider another approach...which is what occurred in the past...that being, if the coal ash sampling showed minimal variation especially as it related to certain parameters, the Department would have flexibility to allow for different parameters to be analyzed and at different sampling frequencies

The cost of environmental compliance has become overbearing and for the past five years has significantly exceeded any comparison to the consumer price index. These compliance costs do not include consumables such as limestone or ammonia to meet air emission limits, etc but are the costs associated with proving compliance with environmental regulations as well as permit and emission fees. These unfair cost burdens are life threatening to the waste coal plants due to their fixed price contracts, small size (electrical output) and the high costs associated with waste coal plant operations.

The increased costs for the beneficial use of coal ash severely restricts the operator from reclaiming the hundreds if not thousands of small piles unless there is a place to put the ash. Therefore, it is critical that the existing large refuse piles continue to be allowed to be rebuilt under 290.104., Section 6, projects involving multiple refuse reprocessing sites. Further for both economic and environmental reasons, the placement of reprocessed refuse rejects from various sources should be allowed to be incorporated into these reclamation projects as long as the blending of the outside fuel allows for the removal and processing of marginal refuse that otherwise would have been left behind and the other criteria in Section 6 are being met.

Certain members have charted the cost of environmental compliance compared to the consumer price index and the unit contracted price for electricity all in 1992 dollars. The chart is revealing and tells a dramatic story. If you look at the year 2009, the 1992 unit value of electricity is \$1.2, the CPI value is \$1.6 and environmental compliance cost value is \$2.4. In other words, in 2009 revenues are down twenty five percent relative to the CPI while environmental compliance costs are up fifty percent. Obviously this economic dynamic cannot continue. The livelihood of Pennsylvania's waste coal plants are at stake.

~~(ji) Annual report Prior to January 31, the permittee of a coal mining activity site where coal ash was placed in the previous calendar year shall submit a report for the previous calendar year to the Department that includes permit number, mining company contact information, the identity of each source of coal ash and its certification number, and the volume in cubic yards and the weight in dry tons for each source of coal ash that was placed at the site.~~

The Department should consider the deletion of the annual reporting requirement in subsection (f), or, at the very least, reduce it to a biennial report. ARIPPA feels that such reporting is redundant to quarterly reports currently submitted to the Department. Accordingly the Department should assess whether this additional reporting requirement is duplicative of other reporting requirements

§ 290.105. Coal ash beneficial use at abandoned coal and non-coal surface mine sites.

(a) *Department approval.* Coal ash may be beneficially used at abandoned coal non-coal surface mine sites if the reclamation work is approved in writing by the Department. The beneficial use of coal ash at abandoned coal surface mine sites will, at a minimum, be based on the following:

(e) *Operating requirements.* The use of coal ash as part of the reclamation activity at abandoned coal surface mine sites must satisfy the following additional requirements:

(1) The pH of the coal ash as placed must be in the range of ~~[6.0] 7.0 to [9.0] 12.5~~, unless otherwise approved by the Department. Lime or limestone may be added to raise pH.

(2) The slope of the reclaimed area may not be greater than 2.5 horizontal to 1.0 vertical. The Department may approve a greater slope based on a demonstration of stability.

(3) Coal ash shall be spread uniformly and compacted in layers not exceeding 2- 4 feet in thickness unless otherwise approved by the Department. The coal ash shall be spread and compacted within 24 to 72 hours of its delivery to the site unless stored in accordance with Subchapter E (relating to coal ash storage).

(4) Placement of the coal ash may also be accomplished by mixing with spoil material.

(5) The coal ash will not be placed within 8 feet of the regional groundwater table, unless the Department approves placement within 8 feet based upon a demonstration that groundwater contamination will not occur.

§ 290.106. Other beneficial uses of coal ash

(a) This section sets forth beneficial uses of coal ash other than use as a structural fill, soil substitute or soil additive.

(b) The following uses of coal ash are deemed to be beneficial and do not require a permit from the Department under the act provided the uses are consistent with the requirements of this section:

(1) The use of coal ash in the manufacture of concrete, concrete products, or as an extender in cement. The coal ash shall be utilized within 24 hours of its delivery to the site unless stored in accordance with Subchapter E (relating to coal ash storage).

The use of certain types of coal ash as an extender to cement production is a feasible and environmentally sound practice that should be added to this section.

§ 290.201. Coal ash certification

(a) Certification standards are as follows:

(1) Maximum acceptable leachate levels for certification:

- (i) For metals and other cations, 25 times the waste classification standard for a contaminant.
- (ii) For contaminants other than metals and cations, the waste classification standard for a contaminant.

(2) The pH of the coal ash must be above 7.0 for mine backfilling, alkaline addition, or use as low-permeability material.

(3) For coal ash used as an alkaline additive, whether as a placement fill or as an alkaline soil additive, the calcium carbonate equivalency, as determined by the Neutralization Potential Test in the Department's *Overburden Sampling and Testing Manual* (Noll, et al., 1988) or other method approved by the Department, must be a minimum of 100 parts per thousand (10% by weight).

ARIPPA supports the ph level of greater than 7.0 and wishes to thank the Department for its ability to amend such regulation based on scientific knowledge and historical data

However the Department should explain why it is departing from the previous maximum acceptable leachate levels (MALLs) for qualification of contaminants other than metals and cations in subsection (a) (1). ARIPPA has interpreted the regulations as follows: for metals and cation, the acceptable leaching level is 25 times the MCLs. However the regulations are unclear as to whether the MCLs are for primary and secondary standards? Also at issue is...how does industry handle anions (Sulfates, chlorides)? The 25 times level appears adequate however, the PADEP policy is for 25 times select metals and cations and is 10 times the secondary MCLs for those metals/cations. PADEP uses 10 times secondary MCLs for sulfate and chlorides; however, the language in the proposed regulation may limit PADEP's capabilities to establish higher levels or to waive such.

PADEP had recognized this issue in the past and utilized a factor of 10 times these values in making a determination regarding the use of coal ash in mine land reclamation. In fact, in an earlier version of the proposed regulations, PADEP was proposing a multiplier of 10 regarding the waste contaminant in this section. In regard to the use of CFB in mine land reclamation, the Department, as well as the Legislature, has found the ash to be beneficial in mine land reclamation and improving water quality. The Department's technical review of allegations (made by certain environmental groups) further confirms the value of mine land reclamation utilizing coal ash and disputes their allegations. In addition, other states have used a multiplier of 10 regarding these parameters and pattern their decisions based on PADEP Guidance documents and policies.

(b) Certification may be granted for use of coal ash not meeting all the appropriate standards in subsection (a) if the following conditions are met:

(1) The coal ash will be used only at specified mine sites. The coal ash certification is limited for use only at a specified site.

Variances from the MALLs for primary MCLs should not be prohibited under subsection (b) (1), and should be assessed on a site-specific basis.

(c) A request for coal ash certification must contain the following information on a form provided by the Department:

(1) The name and location of the generator of the coal ash.

(2) A designation of the beneficial use or uses for which certification is requested

(3) A description of the coal ash generation process specific to the generator, including the combustion and pollution control processes, the fuel sources utilized, and the expected percentage range of coal ash in terms of bottom ash, fly ash, and/or scrubber sludge derived from different processes that will be incorporated into the final coal ash stream to be delivered to the beneficial use site.

(7) An analysis of permeability reported in cm/sec.

The language in subsection (c) (3) and (e) (2) relating to "fuel sources" should be clarified-specified. For instance, is the generator to provide information in the nature of, for instance, bituminous coal from the Middle Kittanning seam, or coal from X Coal Company?

Why is an analysis of conductivity required for coal ash that will not be used as low permeability material? Subsection (c) (7) should be clarified to eliminate the requirement for other beneficial uses of coal ash.

(e) If the coal ash is certified, a representative of the coal ash source generator shall submit regular monitoring information to demonstrate that the coal ash continues to meet the requirements for certification. This information shall be submitted on dates specified by and on forms provided by the Department. At a minimum, monitoring requirements must consist of the following:

- (1) At least one representative sample analysis of the coal ash submitted every six ~~three~~ months.
- (2) A representative sample analysis collected whenever there is a change in operation of the combustion unit generating the coal ash or a significant change in the fuel source.

Under subsection (e) generators of qualified ash will have to submit representative analyses on a quarterly basis, as opposed to the current semi-annual basis. In addition to more frequent analyses, the list of analyses is more extensive. The additional costs incurred by generators may approach several thousand dollars per site per year. This issue should remain at the semi annual basis or be addressed on a case-by-case basis (Site specific and or establish a range in the regulations)

~~(3) Prior to January 31, a yearly report, that includes the volume in cubic yards and the weight in dry tons of ash produced for beneficial use in the previous calendar year and the locations, such as mine sites, where the ash was delivered.~~

The Department should consider the deletion of the annual reporting requirement in subsection (f), or, at the very least, reduce it to a biennial report. ARIPPA feels that such reporting is redundant to quarterly reports currently submitted to the Department. Accordingly the Department should assess whether this additional reporting requirement is duplicative of other reporting requirements.

§ 290.301. Water quality monitoring

(a) A water quality-monitoring plan shall be submitted to the Department for approval prior to placement or storage of coal ash at the sites identified in §§ 290.101(d), 290.104, 290.405(d) or 290.411(e). At a minimum, the plan must include the following information:

- (1) The location and design of ~~down gradient and up gradient~~ monitoring points.
- (2) A minimum of ~~12~~ 6 background samples from each monitoring point taken at monthly intervals prior to placement of coal ash, unless a different number or frequency is approved by the Department. **All background samples collected prior to the placement of coal ash will be used in defining background water quality.**

(3) The samples to be taken quarterly after approval from each monitoring point, unless a different number or frequency is approved by the Department....

~~(g) Water quality monitoring shall continue quarterly for a minimum of 5 years after final placement [or storage of] coal ash at the site, and annually thereafter from the end of year 5 through 10 years after final placement or storage of coal ash at the site. The Department may require more frequent or longer water quality monitoring if the results of water quality monitoring indicate that contamination may be occurring.~~

(g) (i) Based on site-specific parameters and monitoring results to date, water quality monitoring shall continue within a time range. The range shall be quarterly for 3 to 5 years after coal ash placement has been completed, and annually thereafter from the end of year 3 through 5. The Department may require more frequent or longer water quality monitoring if the results of water quality monitoring indicate that potential contamination due to ash placement may be occurring
(ii) Temporary coal ash storage sites which are no longer in use shall perform water quality monitoring quarterly for 1 year after the temporary storage site ceases operations. The Department may require more frequent or longer water quality monitoring if the results of water quality monitoring indicate that potential contamination due to ash placement may be occurring

The draft regulation proposes a minimum of twelve (12) monthly background samples instead of the current six samples to establish a baseline, unless otherwise approved by the Department. The draft should be rephrased to retain the current six months, but allow the Department the discretion to require additional baseline sampling on a site-specific basis. We believe there is no basis to require all sites to have such additional baseline sampling, particularly with the placement of CFB ash. This issue should be addressed on a case-by-case basis (NAS suggested Site specific and or establish a range).

The NAS study highlighted the following, which is in direct conflict with the Departments proposal:

“Some committee members also believed that the longer-term reclamation bond liability would be a significant deterrent to the use of CCRs in mine reclamation—a practice that the committee agrees can provide environmental benefits when managed properly...the committee was unable to reach consensus on the duration of long-term monitoring and liability...p151

If PADEP is requiring additional monitoring points down gradient, than the number of points should be based on the hydrogeology setting of the site and the configuration of the ash placement. The entire Subchapter F program which established baseline loading for ground and surface water looked at the hydrologic cycle in terms of low and high flow periods and required a minimum of six samples covering the high and low points of the hydrologic cycle. There were statistical analyses developed by EPA under contract with PADEP to address the issues. Thus, the minimum number of samples should be similar... not the 12-month period. Accordingly we believe there is no basis to require such additional baseline sampling, particularly with the placement of CFB ash. The draft should be rephrased to retain the current six months, but allow the Department the discretion to require additional baseline sampling or The Applicant should be allowed to submit his permit or request with 6 months of background data and continue to collect water samples to cover the 12-month period. This would need to be completed prior to the placement of ash.

The draft also proposes to continue water quality monitoring for ten years following final ash placement. The Department has provided no justification for imposing this requirement and it is contrary to all the evidence collected to date and the actual findings of the NAS study.

As drafted, the proposed Section 290.301(g) creates a new criterion for bond release that conflicts with 25 Pa. Code Section 86.151 (period of liability) and 86.174 (standards for release of bond). To be consistent with the bonding regulations for coal mining activities, the period of monitoring should be five years after final ash placement and/or Stage II bond release.

Furthermore, it imposes substantial additional costs in the form of ten years of sampling, (even at reduced frequency), the annual \$2,000 permit filing fee, and maintaining a bond on the site...at minimum a total estimated to be in excess of \$100,000 Again, as noted above, monitoring plans should be based on individual site characteristics. This issue should be addressed on a case-by-case basis (NAS suggested Site specific and or establish a range)

As noted in Technical Guidance Document 563-2112-225 – Mine Site Approval for the Beneficial Use of Coal Ash – Draft dated September 20, 2008 on page 2 “To date we have not observed water quality degradation as a result of ash placement, and in some instances we have seen significant improvements in water quality.” If this is accurate it is not logical to drastically increase ash monitoring, and the extension of time an operator is required to monitor the site. Industry is confused by the current proposal...Specifically when does the 10-year clock start... upon placement of the last load of ash or some other time? The Department also needs to clarify how monitoring is tied to the Bonding Program and Bond Calculations

§ 290.302. Number, location and depth of monitoring points

(a) The water quality monitoring system must accurately characterize groundwater flow, groundwater chemistry and flow systems on the site and adjacent area. The system must consist of the following:

(1) At least one monitoring well at a point hydraulically ~~up gradient~~ from the coal ash placement area in the direction of increasing static head that is capable of providing representative data of groundwater not affected by placement of coal ash, except when the coal ash placement area occupies the most ~~up gradient~~ position in the flow system. In that case, sufficient ~~down gradient~~ monitoring points shall be placed to determine the extent of adverse effects on groundwater from the coal ash placement.

(2) ~~At least three~~ **A minimum of two** groundwater monitoring points hydraulically ~~down gradient~~ in the direction of decreasing static head from the area in which coal ash has been or will be placed. The Department may accept two ~~down gradient~~ monitoring points on small sites that can be well represented by two points. The Department may allow one or more springs, seeps and mine discharges to substitute for wells if these points are hydraulically ~~down gradient~~ from the area in which coal ash has been or will be placed and if these points will be as effective or more effective at monitoring the ash placement area than wells. ~~Down gradient~~ monitoring points must be hydrologically connected to the area of ash placement, and must be located and constructed so as to detect any chemical influence of the ash placement area. The ~~down gradient~~ points must be proximate enough to detect contaminants within the life of the placement operation. All monitoring points must be developed and protected in a manner approved by the Department. In addition to groundwater monitoring points, the Department may require downstream monitoring where downstream monitoring is likely to show any chemical influence that the ash placement area may have on the hydrologic regime.

(3) Surface water-monitoring points approved by the Department.

(b) The ~~up gradient and down gradient~~ monitoring wells must be:

(1) Sufficient in number, location and depth to be representative of water quality.

(2) Located so as not to interfere with routine operations at the site.

(3) Located within 200 feet of the area disturbed by the mining and coal ash placement [area], except as necessary to comply with subsection (c), and located at the points of compliance

(c) In addition to the requirements of subsection (b), ~~up gradient~~ monitoring points shall be located so that they will not be affected by effects on groundwater or surface water from the ash placement area.

(d) In addition to the requirements of subsection (b), ~~down gradient~~ monitoring points shall be located so that they will provide early detection of effects on groundwater or surface water from the coal ash placement area.

Subsection (a) (2) requires at least three downgradient monitoring wells, except in the case of “small sites that can be well represented by two points.” Consistent with the language of subsection (b), the number of and type of downgradient monitoring points should be determined on case-by-case basis, with the primary objective being that they are representative of the site. The Department has provided no justification for imposing this requirement and it is contrary to the all the evidence collected to date and the actual findings of the NAS study. This issue should be addressed on a case-by-case basis (NAS suggested Site specific and or establish a range)

We also suggest elimination of naming specific monitoring points (i.e. down and up gradient monitoring points...See strike through above)

§ 290.304. Assessment plan

(a) A person shall prepare and submit to the Department an assessment plan within 60 days after one of the following occurs:

(1) Data obtained from monitoring by the Department or the person indicates a significant **trend** change in the quality of groundwater or surface water from background levels **as a direct result of the coal ash placement** determined under § 290.301(a)(2) (relating to water quality monitoring) at any ~~down-gradient~~ monitoring point.

(2) Within 20 working days after receipt of sample results indicating groundwater or surface water degradation **over baseline**, the person demonstrates that the degradation **may have been caused from seasonal variations, mining operations, or other influences unrelated to coal ash placement** [~~entirely by seasonal variations or activities unrelated to coal ash placement.~~]

(c) The assessment plan must specify the manner in which the person will determine the existence, quality, quantity, area extent and depth of groundwater or surface water degradation and the rate and direction of migration of contaminants **as a direct result of coal ash placement**. An assessment plan shall be prepared and sealed by an expert in the field of hydrogeology who is a licensed professional geologist in the Commonwealth. The plan must contain the following information:

(5) An identification of the abatement standard that will be met.

On one hand the term "significant change" allows flexibility of Department judgment for common sense evaluation, but, on the other hand, industry could incur "significant" legal, consultant and expert witness fees to argue the meaning of the term if questioned.

Accordingly we believe the statement should better define 'a significant trend change'. Unfortunately each site is different and unique in what 'normal variance' of sample results may be. One suggestion is that 'significant change' might be 'an order of magnitude greater than the normal variance between the 'high' and 'low' of the last three years of samples' If such an increase trend is observed, and a 'backup' analysis repeats the results, an increased sample regimen should be instituted with the report of same to track and develop a recovery plan. Some possible "trigger language" should also be considered like 1) if the "significant" level is reached for one or more parameters and laboratory error, sampling bias, and other influences can be ruled out, then 2) resample and analyze next quarter or to some more stringent schedule, at least one more time, to see if the significance level is reached. If laboratory error, sampling bias, and other influences cannot be ruled out, the operator should have the option of retesting on a tighter schedule for verification purposes. (Certain laboratory errors, pulling of a sample that is higher than usual in solids, or some damage to the well, this should be a no-brainer false alarm and it would be unreasonable to expect the operator to incur the expense of re-sampling and retesting)

While the grounds for requiring a groundwater assessment in subsection (a) may be needed to be somewhat subjective and allow the Department latitude to determine the need to assess we none the less feel additional language may be needed to form a published outline of perimeters...such as laboratory error, sampling bias, trends and other influences. Without background data from water supplies, particularly private wells, how is it possible to determine whether contamination, however, defined "could reasonably be attributed to coal ash placement"?

New parameters introduced in 2009 for permits issued prior to that should not count as assessment or abatement triggers. Possibly a chemical signature, exclusive to ash placement, may be incorporated into trigger language. Environmental based associations have suggested some of the following as unique to ash: boron, molybdenum, selenium, oxy-anionic metals, hexavalent chromium, vanadium, thallium, and arsenic. Of these, both selenium and arsenic show up in water samples affected by both waste coal and ash. Some of the oxy-anionic metals (SO₄, CaCO₃ for starters) can be in both waste coal and ash. Therefore, the Department would need to develop a scientifically based distinct chemical signature of ash based on industry and governmental data and science.

(d) The assessment plan directly related to the placement of coal ash shall be implemented upon approval by the Department in accordance with the approved implementation schedule, and be completed in a reasonable time not to exceed 6 months, unless otherwise approved by the Department. If the Department determines that the proposed plan is inadequate, it may modify the plan and approve the plan as modified. If the groundwater or surface water assessment indicates that contamination is leaving the coal ash placement site, the person shall notify, in writing, each owner of a private or public water supply that is located within 1/2-mile downgradient of the coal ash placement area that an assessment has been initiated.

(e) Within 45 days after the completion of the assessment plan regarding to the placement of coal ash, the person shall submit a report containing the new data collected, analysis of the data and recommendations on the necessity for abatement.

(f) If the Department determines after review of the assessment report regarding the placement of coal ash that implementation of an abatement plan is not required by § 290.305 (relating to abatement plan), the person shall submit a revised water quality monitoring plan to the Department for approval that contains any necessary changes to the plan and an application for permit modification, if applicable. The person shall implement the modifications within 30 days of the Department's approval

The requirement to notify water supplies one-half mile downgradient of a site that an assessment has been initiated appears without any basis or reasoning. Shouldn't the rate of groundwater movement be determinative, rather than an arbitrary distance? Moreover, Section 290.305 (c) only requires that the statewide health standard, which includes MCLs, be met at 500 feet beyond the perimeter of the permit area or property boundary, whichever is closer.

§ 290.305. Abatement plan

(a) The person that is required to conduct water quality monitoring as part of coal ash beneficial use or storage shall prepare and submit to the Department an abatement plan whenever one of the following occurs as a direct result of coal ash placement:

(1) The assessment plan prepared and implemented under § 290.304 (relating to assessment plan) shows the presence of groundwater or surface water degradation for one or more contaminants at one or more monitoring points and the analysis under § 290.304(c) indicates that an abatement standard under subsection (c) will not be met.

(2) Monitoring by the Department or person shows the presence of an abatement standard exceedance from one or more compliance points as indicated in subsection (c) even if an assessment plan has not been completed. The person is not required to implement an abatement plan under this paragraph if the following apply:

(i) Within 10 days after receipt of sample results showing an exceedance of abatement standard at a point of compliance described in subsection (c), the person re-samples the affected monitoring points.

(ii) Analysis from re-sampling shows to the Department's satisfaction that an exceedance of an abatement standard has not occurred.

(c) If abatement is required in accordance with subsection (a), the person shall demonstrate compliance with one or more of the following standards at the identified compliance points:

(1) For constituents for which Statewide health standards exist, the Statewide health standard for that constituent at and beyond 500 feet of the perimeter of the permitted coal ash placement area or at and beyond the property boundary, whichever is closer.

(2) The background standard for constituents at and beyond 500 feet of the perimeter of the permitted coal ash placement area or at and beyond the property boundary, whichever is closer. Load-based standards at groundwater discharge points are acceptable if the permit was issued under Chapter 87, Subchapter F or Chapter 88, Subchapter G (relating to surface coal mines: minimum requirements for remaining areas with pollutional discharges; and anthracite surface mining activities and anthracite bank removal and reclamation activities: minimum requirements for remaining areas with pollutional discharges).

(3) For constituents for which no primary MCLs under the Federal and State Safe Drinking Water Acts (42 U.S.C.A. §§ 300f—300j-18; and 35 P.S. §§ 721.1—721.17) exist, the risk-based standard at and beyond 500 feet of the perimeter of the permitted coal ash placement area or at and beyond the property boundary, whichever is closer, if the following conditions are met:

(i) The risk assessment used to establish the standard assumes that human receptors exist at the property boundary.

(ii) The level is derived in a manner consistent with Department guidelines for assessing the health risks of environmental pollutants.

(iii) The level is based on scientifically valid studies conducted in accordance with good laboratory practice standards (40 CFR Part 792 (relating to good laboratory practice standards)) promulgated under the Toxic Substances Control Act (15 U.S.C.A. §§ 2601—2692) or other scientifically valid studies approved by the Department.

(iv) For carcinogens, the level represents a concentration associated with an excess lifetime cancer risk level of 1×10^{-5} at the property boundary.

(4) The cleanup standards as set forth in Chapter 250 of this Title.

Subsection (a) requires that an abatement plan be developed and implemented if abatement standard under subsection (c) will not be met. However, subsection (c) requires a person to demonstrate compliance with one or more abatement standards, depending on location and whether a statewide health standard exists. It is unclear whether the person is given the option of selecting the abatement standard, consistent with the requirements of the Land Recycling and Environmental Remediation Standards Act. And, any risk-based standard for a carcinogen should reflect the lifetime cancer risk levels in the Land Recycling and Environmental Remediation Standards Act.

Subchapter E COAL ASH STORAGE

The sections in this subchapter should clearly distinguish between storage of CFB coal ash, coal ash that has been approved/certified for beneficial use and storage of other coal ash. It is more appropriate to move the storage requirements for the latter to other sections of the waste management regulations or the dam safety regulations, as appropriate.

§ 290.402. Duration of storage

(a) Except as provided in subsection (b) or (c), coal ash may not be stored at the immediate area where it will be put to beneficial use for a longer period of time than necessary to complete the project or 90 days, whichever is less, unless the Department approves a different period in writing.

The language of subsection (a) should be revised to recognize that storage of coal ash at a site where it will be beneficially used for mine fill should be consistent with the reclamation plan for the site. The presumption of disposal language should not apply to coal ash that has been qualified for beneficial use, as it is not a waste under the Solid Waste Management Act.

§ 290.404. Areas where coal ash storage is prohibited

(a) Coal ash storage areas, other than storage impoundments, may not be operated as follows, unless otherwise authorized by the Department in writing:

(1) Within 100 feet of an intermittent or perennial stream.

(2) Within 300 feet of a groundwater water source.

(3) Within 1,000 feet up gradient of a surface drinking water source.

(7) Within ~~900~~ **300** feet measured horizontally from an occupied dwelling, unless the owner of the dwelling has provided a written waiver consenting to the coal ash storage impoundment being closer than ~~900~~ **300** feet. A waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the owner. A closed coal ash storage impoundment that submits an application to reopen and expand shall also be subject to this paragraph.

(8) Within 100 feet of a property line, unless the current owner has provided a written consent to the coal ash storage impoundment being closer than 100 feet. The waiver shall be knowingly made and separate from a lease or deed unless the lease or deed contains an explicit waiver from the current owner.

(9) Within 1/4 mile up gradient, and within 300 feet down gradient, of a private or public water source, except that the Department may waive or modify these isolation distances if the person demonstrates and the Department finds, in writing, that the following conditions have been met:

(10) At a school, park or playground as follows:

(i) Within ~~900~~ 300 feet of the following:

- (A) A building that is owned by a school district or school and used for instructional purposes.
- (B) A park.
- (C) A playground.

This section of proposed regulations once again ignores two of the clear findings of the NAS study. CCR characterization and site characterization should determine the management regulations of ash. CFB ash is unique...each site is unique. This subsection appears to dismiss 20 years of PADEP collected data and findings by EPA, NAS and OSM that CFB ash is not an environmental hazard...or a waste...rather it is a by-product residue that if managed and regulated properly can be environmentally beneficial.

In fact the NAS study specifically notes:

- Cementations fly ash is especially effective for such use, and FBC fly ashes have been shown to have sufficient bearing capacity for most post-mining uses. Underground mines may be sealed off to decrease the possibility of AMD from polluting the surface waters, to reduce the occurrence mine fires, or for the overall safety of the general public. Alkaline CCRs (especially FBC CCRs) can be used to neutralize existing acidity in groundwater (see Chapter 3). CCRs can also act as a seal to reduce the oxidation of pyrite in the coal spoil, thus slowing the rate of generation of additional AMD. P 46
- EPA further justified its choice of subtitle D regulation by noting that it did not want to place any unnecessary barriers on the beneficial reuse of CCRs and the consequent environmental benefits associated with such reuse.p102

Accordingly there is no scientific basis for prohibiting coal ash (let alone CFB ash) storage impoundments within 900 or even 300 feet of an occupied dwelling, school or park, unless there is a written waiver. This is pure unscientific political bias, which will serve as nothing more than to place unfounded fear in the minds of Commonwealth citizens and stand as a government regulatory action that conflicts with the NAS suggestion that government "promote CCR use or remove impediments to its use" p148

Accordingly ARIPPA suggests that the language in this section be: (i) deleted, (ii) differentiated based on the characterization of the ash...i.e. CFB ash versus other ash or (iii) minimized to a 300 foot barrier for all ash usage

§ 290.406 Storage piles—storage pad or liner system.

(a) A person that installs a storage pad or liner system to prevent groundwater degradation shall meet the requirements of this section. This section does not preclude a person from using other means to prevent groundwater degradation, such as enclosure in a building.

(b) The storage pad or liner system must meet the following requirements:

(5) Be constructed of nonsolid waste ~~[and non-coal ash material]~~.

(6) Be no less permeable than $1 \times [10^{-7}]$ 10^{-6} cm/sec., as demonstrated by field and laboratory testing.

The liner permeability requirement should be 1×10^{-6} cm/sec.

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.

Jeff A McNelly, Executive Director, ARIPPA
2015 Chestnut Street Camp Hill PA 17011
Phone: 717 763 7635, Fax: 717 763 7455 Cell: 717 319 1457
Email: jamcnelly1@arippa.org, Alt Email: office@arippa.org
Web: www.arippa.org