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Dec 22, 2009

Honorable Lisa Jackson  
Administrator  
United States Environmental Protection Agency  
Ariel Rios Building  
1200 Pennsylvania Ave NW  
MC 1101A  
Washington, DC 20460

RE: Federal Rulemaking for Coal Combustion Residue (also known as coal byproducts, coal ash, etc)

Dear Administrator Jackson,

Today marks the one year anniversary of an extraordinary clean-up effort by TVA following an unfortunate accident that occurred at their Kingston wet coal ash slurry impoundment site. The wet coal ash slurry impoundment was located at/on the bend of a river in Kingston, TN.

While the ash accident/spill maybe a legitimate and logical reason for EPA and/or OSHA to investigate, make recommendations, and/or if necessary, propose regulatory improvements specifically pertaining to wet ash impoundments such as found at TVA Kingston we feel it is unreasonable to draw any correlation between the unfortunate accident that occurred to CFB ash residue (ash) management practices.

CFB ash is a highly regulated, safe, time tested, environmentally beneficial used byproduct. Our industry efforts which are directly regulated by PADEP have to date effectively reclaimed thousands of acres of previously mine damaged lands and streams. Accordingly we feel it is unreasonable to misinterpret this single accident as a logical motivation to propose the classification of all coal ash (that has many beneficial uses including mine reclamation), as a "hazardous waste".

We strongly encourage the EPA to consider the negative implications of classifying all coal ash as a "hazardous waste" under subtitle C of the RCRA Act.

### **Description of ARIPPA Member Facilities and its Environmental Clean-up efforts**

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. (As well as other waste coal-fired electric generating plants based in WV and NY) 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. 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 out the ability to "pass on" increased operational or environmental compliance costs to rate payers or consumers.

For nearly two centuries coal has been mined 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.

Our 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 tax dollars and take over 500 years to accomplish. ARIPPA plants work closely with PADEP, various local environmentally sound 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 waterways.

Accordingly 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, PADEP and PAPUC.

### **CFB waste coal to alternative energy ash is unique and environmentally beneficial**

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. In fact the National Academies of Science 2006 study on CCR use in mine filling clearly emphasizes the outstanding performance of the Commonwealths current beneficial use of ash 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.”

The NAS study also outlines the many advantages of current beneficial use of ash: “Cementations fly ash is especially effective for such use, and (CFB) 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

The National Academies of Science 2006 study on CCR use in mine filling also 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”

### **Various sources, studies, and reports have established that current PA ash regulated practices are the most comprehensive and dependable in the country**

2006 The National Academy of Science report cited a number of benefits of using FBC ashes produced from the burning of waste coals piles “...”In conclusion, we believe that Pennsylvania’s current regulations largely address the proper management and beneficial use of CCRs”

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. PADEP 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.”

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”

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”.

On July 28 2009 PAPUC Commissioners wrote in a letter addressed to EPA wrote: “We understand that, to date, every state environmental agency that has weighed in on the issue (approximately twenty state agencies) has opposed regulation CCBs as hazardous waste because CCBs exhibit no hazardous characteristics and regulation of CCBs as hazardous would prevent the beneficial uses of the material due to the stigma that would attach. Instead, every state has taken the position that the best management option for regulating CCBs is as non-hazardous waste under RCRA Subtitle D. We are concerned that, notwithstanding the views of the

states, EPA could nonetheless regulate CCBs as hazardous waste and that power plants in our state will be confronted with sharply higher operating costs which will eventually be passed on to customers. Some smaller plants may actually have to cease operations because the costs of retrofitting their CCB management units to meet the hazardous waste standards and/or losing the capacity to manage CCBs in surface impoundments will be too high to allow these plants to recover the conversion costs given the limited capacity of these units. In Pennsylvania, this would affect our many smaller pulverized coal-fired and waste coal-fired plants which are not large enough to absorb the cost of disposing of large volumes of “hazardous” waste, which are not hazardous under any commonly accepted definition of that term. As you can appreciate, the loss of generating capacity is a significant concern to us as it would directly threaten our utilities’ ability to provide reliable and cost-effective power. Since the states have already made clear that their programs will ensure the safe management of CCBs, we see no reason for EPA to pursue the hazardous waste option. Such an approach would appear to be regulatory overkill and, more importantly, could threaten cost-effective and reliable provision of electric services in Pennsylvania.

### **CFB Ash if declared as a “hazardous waste” will be the our FINAL INDUSTRY ISSUE**

On November 12<sup>th</sup>, 2009 ARIPPA, Ohio State University, PADEP and IMCC officials met with Courtney Higgins and other OMB staff to clearly outline the negative implications classifying fly ash as a “hazardous waste” under subtitle C of the RCRA Act would have on our industry. We presented the following industry data on estimated costs to handle ash:

- If currently utilized as a PA Regulated Beneficial Use, CCR management costs average \$1,687,220/yr or \$3.45/MWhr per plant (waste coal to alternative energy)
- If declared Non-Hazardous Waste the average (per plant) CCR management costs will increase almost 9 fold to \$18, 331,105/yr or \$30.40/MWhr (\*operate at a loss)
- If declared Hazardous Waste the average (per plant) CCR management costs will increase more than 31 times to \$55,017,736/yr or \$108.24/MWhr (\*operate at a loss)

(\*Note the electric rate range in the PJM grid area was approx \$40 to \$50 per MWhr in 2009)

Simple economic math clearly indicates that if all coal ash is classified as a “hazardous waste” our entire industry is more than likely out of business and operations will likely close...meaning:

#### 1. THOUSANDS OF WORKERS WILL BECOME UNEMPLOYED

- Industry data on estimated labor force directly employed by the waste coal to alternative energy industry total 1304 employees or an average of 69 workers per plant. Estimates of those indirectly employed or affected by the waste coal to alternative energy industry total 3798 workers or an average of 199 workers per plant.

#### 2. 10% OF PENNSYLVANIA’S TOTAL ENERGY CAPACITY WILL BE LOST

- The amount of electricity produced at waste coal to alternative energy plants in PA total 1449 MW’s or an average of 97MGW per plant...add these figures to the amount produced in WV and the totals increase to 1721 MW’s or an average per plant of 91 MGW

#### 3. THE ENVIRONMENTAL LAND RECLAMATION BENEFITS WE PROVIDE WILL VANISH

- The waste-coal-to-alternative-energy industry reached a significant milestone in 2008 in its ongoing efforts to reclaim damaged abandoned mine reclamation lands and streams. Industry data (data recording began in1988) indicates that over 4,500 acres of mine-scarred lands have been reclaimed which in turn restored life to hundreds of miles of formerly dead streams.

## **Conclusions**

We are aware that certain associations, that have as a primary goal the elimination of the use of all fossil fuels, have voiced and lobbied their opinion on this matter suggesting that classifying coal ash as a “hazardous waste” is scientifically sound and will indeed encourage beneficial use. Nothing could be further from the truth:

- In the mid-1980s, the PADEP 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. Keith Brady, Bureau of Mining and Reclamation, Division of Permits PADEP in a March of 2009 letter wrote “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.” (the link below will take you to the report he presented to OMB) <http://www.uswag.org/pdf/2009/PADEPOMB.pdf>
- Allegations made by the CATF have been time after time examined through PADEP investigations and found to be erroneous. PADEP’s response to the CATF report demonstrates, once again, that the CATF allegations of pollution from ash are seriously flawed.”  
[PA DEP Response to Clean Air Task Force Report: "Impact on Water Quality From Placement of Coal Combustion Waste in Pennsylvania Coal Mines"](#)
- Regulation of CFB ash as hazardous would prevent the beneficial uses of the material due to the potential liability, handling and transport costs, as well as the stigma that would be attached to this here-to-date beneficially used material.

Any proposal to regulate disposal of CCPs/CCRs as “hazardous waste” threatens to undo the considerable progress that industry, in partnership with watershed groups, PADEP and EPA, has made to increase CCP beneficial use. Nearly 30 years of technical study with high scientific integrity has concluded that there is no basis for a hazardous waste designation for CCPs – for disposal or beneficial use. Similarly, going back to 1980, years of federal regulatory determinations have also concluded that a hazardous waste designation is unwarranted. And most importantly, a hazardous determination would undo and nearly completely stop beneficial uses for all CCPs.

We believe that a hazardous waste designation is not supported by nearly three decades of NAS and EPA studies and formal determinations marked by strong scientific integrity. The regulation of CCP disposal as non-hazardous waste under RCRA Subtitle D will ensure protection of human health and the environment without unnecessarily stigmatizing resources that have the high potential for safe beneficial use as a preferred alternative to disposal. This approach will ensure that CCPs are safely managed while continuing to promote and expand their beneficial use.

ARIPPA wishes to thank the EPA and OMB, 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 taxpayers... symbolizes our ongoing effort to continually improve the landscape of our Commonwealth and our nation.

Thank you for your consideration of ARIPPA’s views. ([See 3 success samples attached](#))

Sincerely,

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CC: President Barack Obama  
Senator Robert Byrd  
Senator Robert Casey Jr.  
Senator Kirsten Gillibrand  
Senator Jay Rockefeller  
Senator Charles Schumer  
Senator Arlen Specter  
Congressman Jason Altmire  
Congressman Robert Brady  
Congressman Christopher Carney  
Congressman Kathy Dahlkemper

Congressman Charles Dent  
Congressman Mike Doyle  
Congressman Chaka Fattah  
Congressman James Gerlach  
Congressman Timothy Holden  
Congressman Paul Kanjorski  
Congressman John Murtha  
Congressman Patrick Murphy  
Congressman Timothy Murphy  
Congressman Todd Platts  
Congressman Joseph Pitts

Congressman Allison Schwartz  
Congressman Joe Sestak  
Congressman Bill Shuster  
Congressman Glenn Thompson  
Carol Browner, White House  
Rahm Emanuel, White House  
Susan Bodine, US EPA  
Matthew Hale, US EPA  
Mathy Stanislaus, US EPA  
Courtney Higgins, OMB  
Peter Orszag, OMB  
Cass Sunstein, OMB

## **ATTACHMENT: Three (of several) samples of successful Abandoned Mine Land/Stream Reclamation Sites in Pennsylvania**

Mine reclamation has been identified as a long-term, large-volume beneficial use market for CCBs. Nonetheless, use of CCBs in mine reclamation currently is performed on a limited basis relative to the overall quantity of CCBs generated each year. Only 0.68 million tons of fly ash, 1.2 million tons of bottom ash, and about 0.39 million tons of FGD materials were used in mining applications in year 2003 (American Coal Association, 2004)

### **Harwick Mine Complex, PA**

The Harwick Mine Complex includes the Monarch, Old Harwick and Cornell Mines covering approximately 7,000 acres. The complex is a deep mine and was operated from about 1932 through June 1970. The mine disposal operation consists of a wet ash handling system to pump 10 percent solids slurry for a distance of approximately 8,000 feet to two operating injection boreholes at the Harwick Mine Complex. Approximately 3 to 4 million gallons per day of the slurry are conveyed. Approximately 150,000 tons of coal ash is injected annually in the mine along with millions of gallons of water. The water quality data from samples of the mine water indicates no adverse effect on the water in the Harwick Mine Complex.

### **Clinton County, PA**

The Clinton County, Pennsylvania, mine provides an example of how placement of FBC ash in a closed-surface coal mine can result in beneficial effects on water quality, because of the favorable geochemistry that occurs. The alkaline FBC ash neutralizes the acidic AMD waters resulting in precipitous decreases in arsenic, cadmium, and aluminum concentrations due to lower solubility and precipitation of solids. Results indicate that the injection of grout caused a temporary increase in pH from about 2.3 to about 9, as the alkaline FBC ash neutralized the acidic AMD waters. The pH increase resulted in precipitous decreases in arsenic, cadmium, and aluminum concentrations reflecting lower solubility and precipitation to solid phase compounds.

### **Big Gorilla Pit, PA**

In eastern Pennsylvania, there are several pre-act stripping pits in the middle of an anthracite coal basin where active strip and deep mining for coal was practiced since the 1800s. The strip mined pit known as Big Gorilla was one such location. The Pennsylvania Department of Environmental Protection's Regional Mining office in conjunction with the Wilkes-Barre Regional office issued a demonstration permit for the placement of cogeneration-derived dry fly and bottom ash into standing water in the Big Gorilla Pit. Ash deposition has taken place since August 1997. Over three million tons of ash was used to completely fill the pit which contained acid mine water pool. The Big Gorilla water has maintained a consistently high pH value in response to the placement of ash. Iron, manganese, magnesium, aluminum, and zinc all have decreased significantly. One long-term effect of ash placement in the former Big Gorilla mine pool will be the prevention of acidic water production through the surface mine pool.