

DEPARTMENT OF THE ENVIRONMENT

ENVIROMATTERS

April 3, 2009

The Trouble with Coal Combustion By-Products

Coal combustion byproducts (“CCBs”) have been in the forefront of the national news, as a result of last December’s catastrophic coal ash spill in Tennessee, and in Maryland news since in 2007, due to groundwater contamination in Gambrills resulting from ash disposal.

Even as Maryland increases our use of renewable energy, 60 percent of our State’s energy currently comes from coal. When we burn coal for electricity, we produce coal combustion byproducts that include fly ash and bottom ash (sometimes called “coal ash”) and scrubber sludge. The challenge for facilities burning coal—and for their customers—is what to do with the leftover CCBs? The challenge for the Department of the Environment is to ensure the safe disposal of CCBs, and to encourage their re-use, in ways that do not harm public health or the environment.

Thanks to the Healthy Air Act, beginning in 2010, Maryland’s largest coal-burning power plants will capture far more coal combustion byproducts before they escape into the air, but the pollution-reducing “scrubbers” will generate more sludge that we must dispose of or re-use. While Maryland now produces about 2 million tons of coal ash each year, by 2013, we expect Maryland will generate 4.5 million tons of CCBs annually.

In early 2007, MDE began working on regulations to improve requirements for disposing of CCBs and for using them in mine reclamation. The need for such protections was confirmed after the discovery of groundwater contamination from fly ash used to reclaim an unlined sand and gravel pit in Gambrills. In June 2008, MDE testified before Congress asking for a federal minimum threshold standard for the disposal and re-use of coal combustion by-products.

In the absence of federal requirements, on December 1, 2008, MDE enacted the State’s first-ever coal combustion byproduct regulations that require leachate (precipitation mixed with waste) collection, groundwater monitoring, the use of liners, and routine analysis for disposal facilities. The regulations set standards and monitoring requirements. The regulations also improved standards for coal mine reclamation sites, where alkaline ash is used to reclaim the mines and, in part, to reduce acidity in mine drainage. MDE now also requires annual reports from every generator of CCBs, so, for the first time, we have an accurate inventory of the volume created and where it ends up. MDE moved ahead with these new permitting requirements, without the necessary funding to implement the regulations, because of the public health need.

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Maryland recently experienced a close call with CCBs when a pipe crossing the Potomac River from NewPage's Luke Paper mill to a surface impoundment in West Virginia developed a dime-sized hole, leaking approximately 4,000 gallons of slurry (CCBs mixed with water). Fortunately, most of the material ended up on the streambank, and not in the river. The other good news was that each gallon of slurry spilled would have been diluted by 36,000 gallons of river water. MDE investigators saw no dead fish or wildlife at the scene, and cleanup was completed the day after the spill was discovered. While it appears there was no serious harm, the incident was a reminder of the importance of having a regulatory program, as well as the challenge of having regulations that vary from state to state without federal oversight.

Several legislative proposals related to CCBs are being considered in Maryland this General Assembly Session. MDE is sponsoring HB1556, which would authorize MDE to establish a small "fee for service" on each ton of CCBs generated to pay for permit

reviews and other costs to implement the new regulatory program and protect human health and the environment. Another bill requiring MDE to propose regulations on the beneficial reuse and transportation of CCBs by the end of this year is also being debated.

With updated disposal and mine reclamation requirements in place, our next critical task is to make sure existing facilities come into compliance with the new regulations and to set standards that will encourage safe recycling or "beneficial" use of coal waste, which can—instead of ending up in landfills or coal mines—safely be recycled into wallboard and cement. The problems stemming from CCB disposal illustrate that the more of this waste that can be re-used, the better.

With increasing public awareness about CCBs, and a firm commitment from new Environmental Protection Agency Administrator Lisa Jackson to examine this serious issue, we look forward to continued improvement in how we address CCBs more effectively, not only in Maryland, but across the Country.



Sincerely,

A handwritten signature in black ink that reads "Shari T. Wilson". The signature is fluid and cursive, written over a white background.

Shari T. Wilson
Secretary, Maryland Department of the Environment