

## COAL ASH PITS AND PONDS

*By Gary Antonides*



A lot is heard about the problem of radioactive waste from nuclear power plants, which is a very serious issue that has been kicked down the road and must be dealt with at some point in the future. In contrast, the waste (coal ash) from coal burning plants has been poisoning us for years and is just recently being recognized as a major problem.

Coal ash is the toxic waste formed from burning coal in power plants, and is linked to the country's four leading causes of death: heart disease, cancer, respiratory diseases and stroke as well as brain damage in children.<sup>1</sup> Coal ash consists of light fly ash collected in the smokestack, plus heavier bottom ash left after the coal has burned. There are over 1,000 operating coal ash landfills and ponds in the country as well as many hundreds of "retired" coal ash disposal sites.

For decades, coal ash was dumped into unlined landfills or into ponds where the fly ash produces a toxic slurry. At many of these sites, hazardous chemicals seep into our waterways and soil and blow into the air. Coal ash contains some of some of the deadliest known toxins including arsenic, lead, mercury, chromium, radium and selenium. The toxins in coal become concentrated in the ash as it is burned.

Prior to 2015, the states regulated coal ash and the dumps became ticking time bombs. But in October 2015, the first ever EPA safeguards to protect communities near coal ash dumps went into effect. The EPA has released a list of more than 1,400 coal ash dump sites across the country.<sup>2</sup> They classify 81 coal ash ponds as "high risk," which means dam failure or operator error will probably cause loss of life. Also, 250 are rated "significant risk," meaning loss of life is not likely, but economic loss, environmental damage and disruption of public utilities are.

Recently, the subject of coal ash is in the news because a federal court has ruled that the 2015 safeguards are not adequate and EPA must do more to protect the public. At the same time, the Trump administration wants to roll back some of the 2015 safeguards. It is not at all clear what will happen.

One of the things EPA's 2015 coal ash rule requires is that utilities test the water near their coal ash dumps to make sure hazardous chemicals are not leaking into drinking water sources. Industry monitoring results made available to the public revealed that more than 92 percent of the coal ash dumps in the U.S. are contaminating groundwater above levels that EPA deems safe for drinking water. They have unsafe levels of at least one of the following constituents, arsenic, boron, cobalt, lithium, molybdenum, radium or sulfate.<sup>3</sup>

In 2008, the single-largest toxic waste spill in the U.S. happened when a billion gallons of coal ash sludge burst through a dam at the TVA Kingston plant in Harriman, Tennessee and covered 300 acres, destroying dozens of homes. In another incident, in 2014, a portion of a coal ash dump in North Carolina collapsed, fouling 80 miles of the Dan River with toxic sludge. More recently, during Hurricane Florence, five of Duke Energy's coal ash dumps were breached and coal ash was dumped into the Cape Fear River near Wilmington, NC and the Neuse River.

Currently, Indiana [has more coal ash sites](#) than any other state, mostly unlined. After 15 of their 86 coal ash sites were tested as required by the 2015 regulations, all were contaminating the nearby groundwater. Earthjustice says Indiana had some of the weakest regulations in the nation and the electric utilities and coal companies have enormous power in Indiana.<sup>4</sup> Other states have their share of problems as well.



*Toxic coal ash dust at the Making Money Having Fun Landfill in Bokoshe, OK.*

## **Maryland**

Maryland ranks 23rd in the country for coal ash generation. Fortunately, coal ash ponds in Maryland are prohibited, but there are 31 coal ash dumps in Maryland. Eighteen of them are near Cumberland, MD where the Warrior Run plant uses the coal ash to fill several old mines.

Many of Maryland's landfill regulations are very lax. Surface or groundwater monitoring may or may not be required. Landfills that pre-dated regulations may or may not be "grandfathered" and exempt from regulation. Also, the postclosure monitoring requirement for landfills is only 5 years, and a composite liner is not required (only a clay or a synthetic liner is required).

Of the 31, three dumps are in Anne Arundel County, all associated with Constellation Energy's Brandon Shores and H.A. Wagner Power Plants, which are both located on the same site just east of Glen Burnie. The three are: (1) the BBSS Sand and Gravel Pit Structural Fill (also known as Gambrills), (2) the Brandon Woods Structural Fill, and (3) the Millersville Landfill.

Maryland is not exempt from contamination problems with coal ash sites.<sup>5</sup> On March 9, 2009, New Page Corp. in Allegany County spilled 4,000 gallons of coal ash slurry into the North Branch Potomac River.

MDE is suing Mirant Corporation in federal court for Clean Water Act violations at all three of their sites: the Faulkner, Brandywine, and Westland ash landfills. The worst of these three appears to be at Brandywine, where there has been damage to groundwater and surface water. Groundwater monitoring beneath and downgradient of the landfill has found cadmium, iron, aluminum, manganese, sulfates, total dissolved solids, and chlorides at levels that exceed drinking water standards by as much as 50, 100, and even 600 times the MCL. Cadmium and lead levels also regularly exceed water quality criteria in Mataponi Creek downstream of the landfill.

In Anne Arundel County, in Gambrills, drinking water wells were contaminated with heavy metals in 2007. For years, sand and gravel had been mined from the site, which was then filled in with 4.6 million tons of coal fly ash from Constellation's power plants in Pasadena from 1995 until 2007 without a proper liner. Chemicals from the fly ash leaked out of the pits and into groundwater, contaminating nearby wells. Constellation had to pay a \$1 million fine to the state, millions of dollars to residential neighbors, and also pay for public water service to the area. The settlement with the state included capping the ash pits and redeveloping them. The site is now the location of the Waugh Chapel Towne Centre.<sup>6</sup> Some residents and environmentalists claim that not enough was done. Anne Arundel County has since banned all dumping of coal ash in the County.

In 2013, the owner of the Walden Golf Club in Crofton sued Constellation for \$20 million, claiming the course had been badly damaged by toxic pollution leaking from a closed coal ash dump. They said their well was contaminated and ruined the landscaping and damaged equipment.<sup>7</sup> They claimed soil and water tests showed "abnormally high levels" of aluminum, lead, vanadium, nickel and sulfates.

At the Millersville Sanitary Landfill, intensive groundwater monitoring is done for many parameters. Monitoring is required for the life of the facility plus at least 30 years. That landfill is still active, but the area containing the fly ash is closed and capped.

As mentioned before, near Cumberland, hundreds of thousands of tons of ash is being dumped into mine pits. State officials say that dumping alkaline coal ash into mines is beneficial for Western Maryland's streams which can suffer from acidic pollution leaching from the rubble left behind after the coal is extracted. (It's also a money-saver for the power company since it doesn't have to pay for costly disposal in a state-regulated landfill.) But the state has been testing mainly for acidic mine drainage over the years, and not for arsenic, lead, selenium and the rest of the toxins found in coal ash. Environmentalists say filling coal mines with ash is a worrisome experiment that has not proved to be safe and safeguards are needed.

Maryland Governor Larry Hogan's Administration has recently imposed limits on toxic metals in water pollution from three of the state's largest coal-fired power plants. The new limits at the Chalk Point power plant in Prince George's County, Dickerson plant in Montgomery County, and Morgantown plant in Charles County could reduce toxic discharges by up to 97 percent in some cases. The water is question is used in their pollution scrubbers and to flush bottom ash out of their boilers.



*The Chalk Point Power Generating Plant located on the Patuxent River*

### **Federal Court Decision**

In August, the D.C. Circuit Court of Appeals' ruled that the EPA must increase protection for hundreds of communities near the more than 850 coal ash ponds across the nation, both active and the "legacy" ash ponds at retired coal plant sites.<sup>9</sup> This decision arose from lawsuits challenging the 2015 coal ash rule. One lawsuit, by public interest groups, argued that the rule was not strong enough, and one, by industry groups, argued that it was too stringent

Unfortunately, [EPA's 2015 coal ash rule](#) had allowed more than 630 unlined coal ash ponds to continue to operate despite their leaking dangerous pollution into groundwater, lakes and rivers. The 2015 rule also exempted more than 100 "legacy" ash ponds. The court concluded that this fell short of statutory requirements to protect human health and the environment, and ordered EPA to strengthen the rule as well as to address unlined ponds before utilities find they are leaking. The court's decision indicates not only that the EPA has the authority to regulate coal ash dumps, but that it must.

### **New Trump/EPA Rollbacks**

In July, pro-coal and utility industry groups convinced the EPA to roll back [the 2015 coal ash regulations](#). Earthjustice, Clean Water Action, the Sierra Club and the Environmental Integrity Project are [challenging this regulatory rollback](#).

One [part of the EPAs two-part rule was](#) made public in August.<sup>10</sup> This rule (Coal Combustion Residuals, or CCR rule):

- Hands coal ash oversight back to states.
- Fails to add boron to the list of pollutants that will be cleaned up in groundwater at contaminated sites.
- Weakens drinking water protection standards for lead, cobalt, lithium and molybdenum.
- Extends deadlines for closing unlined leaking ash ponds and lets leaking ponds continue to operate.
- Permits states to terminate groundwater monitoring.
- Allows state officials to judge whether sites are following the rules instead of professional engineers.

Every one of the changes is in response to an industry petition filed with the Trump administration in 2017.

The Court's decision came after the EPA's revisions of the 2015 rule, and casts serious doubt on the legality of those revisions. It's encouraging that courts have repeatedly struck down many of the Administration's attempts to eliminate environmental regulations. Our federal courts play an invaluable role in judging the legality of this Administration's efforts to gut environmental protections.

#### References:

1. <https://www.epa.gov/coalash>
2. <https://earthjustice.org/sites/default/files/md-coal-ash-factsheet.pdf>
3. "Court Upholds National Safeguard for Coal Ash," <https://earthjustice.org/news/press/2018/court-upholds-national-safeguard-for-coal-ashnation-s-no-2-toxic-pollution-threat>
4. "New Tests Reveal 15 out of 15 of Indiana's Coal Ash Ponds Are Leaking," By Jessica A. Knoblauch, August 17, 2018, <https://earthjustice.org/blog/2018-august/indiana-at-a-crossroads-on-coal-ash>
5. "Maryland Coal Ash Water Contamination and Disposal Sites," <http://chesapeakeclimate.org/wp/wp-content/uploads/2013/03/MarylandCoalAshSites.pdf>
6. "State data showing no evidence of harm to streams does little to quell environmental, health concerns," March 08, 2009, By Timothy B. Wheeler, [tim\\_wheeler@baltsun.com](mailto:tim_wheeler@baltsun.com)
7. "Crofton golf club claims fly ash damage," Capital Gazette, <http://www.capitalgazette.com/cg2-arc-5370709e-f3f3-5cdd-b495-bc7e1e638df420130104-story.html>
8. "Environmental Groups Win Victory in Reducing Coal Plant Water Pollution in MD," <http://paxriverkeeper.org/environmental-groups-winvictory-in-reducing-coal-plant-water-pollution-in-md/>
9. "Huge Win for Communities Threatened by Toxic Coal Pollution," Lisa Evans, Aug. 29, 2018, <https://earthjustice.org/from-the-experts/2018august/coal-ash-victory>
10. "Trump Administration's New Rule Weakens Toxic Coal Ash Pollution Safeguards," July 18, 2018, by Lisa Evans, Earthjustice, <https://earthjustice.org/news/press/2018/trump-administration-s-new-rule-weakens-toxic-coal-ash-pollution-safeguards>,