EARTHJUSTICE NRDC

TOXIC COAL ASH IN NORTH CAROLINA

Addressing Coal Plants' Hazardous Legacy

For decades, utilities disposed of coal ash – the hazardous substance left after burning coal for energy – by dumping it in unlined ponds and landfills. **North Carolina has 47 coal ash dumpsites.** Coal ash contains hazardous pollutants including arsenic, boron, cobalt, chromium, lead, lithium, mercury, molybdenum, radium, selenium, and other heavy metals, which have been linked to cancer, heart and thyroid disease, reproductive failure, and neurological harm. Industry's own data indicate that across the country 91% of coal plants are currently contaminating groundwater above federal health standards with toxic pollutants.[1]

Coal ash is leaching unsafe levels of toxic pollutants into groundwater at 91% of coal plants in the United States.

Coal ash remains one of our nation's largest toxic industrial waste streams. U.S. coal plants continue to produce approximately 70 million tons every year.[2]

Despite EPA's 2015 Coal Ash Rule, which created the first-ever safeguards for coal ash disposal, many coal ash dumps remain unregulated due to sweeping exemptions for legacy coal ash ponds and inactive landfills. The exempted coal ash dumps are sited disproportionately in low-income communities and communities of color. The EPA will issue a proposed rule to address these exemptions in May 2023.

North Carolina utilities operate **37 federally regulated coal ash ponds and landfills** containing more than 130 million cubic yards of toxic waste at 14 facilities (Table 1). Coal ash has caused groundwater contamination at all of North Carolina's regulated dumpsites – most of which are owned by Duke Energy, the company responsible for the catastrophic Dan River coal ash spill in 2014. Some of these dumps are contaminating water at dozens or even hundreds of times the safe levels of certain pollutants. Allen Steam Station, is the fifth most contaminated coal ash site in the U.S.[3] Despite the serious and widespread water contamination, no North Carolina company, to date, has initiated a plant-wide cleanup to restore groundwater, despite the legal requirement to do so.

In addition, North Carolina hosts at least **10 *unregulated* inactive coal ash landfills and legacy ponds** that escape federal regulation (Table 2). The exact number remains unknown because utilities are not required to report these sites. These dumps are almost certainly contaminating water and threatening health and the environment; however, monitoring data are not currently available for most unregulated sites. As we anticipate EPA's proposed rule on legacy ponds and unregulated landfills in May 2023, a concern remains that the agency will not address coal ash that was dumped off site or used as fill.

Action Needed

The magnitude of harm from recklessly dumped toxic coal ash requires decisive action from federal and state regulators. Utilities must be required to comply with the law and immediately clean up their pollution.[4] EPA and states must make enforcement a priority and act quickly to ensure that utilities leave communities with sites that benefit rather than harm their health, environment, and economic status. EPA must swiftly strengthen the Coal Ash Rule to address the many legacy ponds and inactive landfills that are unregulated, and to prohibit coal ash used as fill unless protective measures are put in place, to ensure all North Carolina communities are protected from coal ash pollution.

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Table 1: 37 Regulated Coal Ash Disposal Sites in North Carolina

Coal Plant	City	Owner	Coal Ash Dumps	Groundwater Contamination from Coal Ash Magnitude of exceedance above federal health-based guidelines[5]
Allen	Belmont	Duke Energy	2 unlined ponds, 1 landfill	Arsenic (x7), Beryllium (x6), Boron (x1), Cadmium (x1), Cobalt (x466), Lithium (x12), Selenium (x5), Sulfate (x3), Thallium (x1)
Asheville	Arden	Duke Energy	2 unlined ponds	Boron (x5), Cobalt (x17), Radium 226+228 (x14), Sulfate (x2)
Belews Creek	Belews Creek	Duke Energy	1 unlined pond, 2 landfills	Arsenic (x5), Beryllium (x1), Boron (x7), Cobalt (x40), Lithium (x24), Molybdenum (x8), Radium 226+228 (x1)
Brickhaven No. 2 Mine Tract "A"	Moncure	Green Meadow, LLC	1 landfill	Lithium (x3)
Buck	Salisbury	Duke Energy	3 unlined ponds	Boron (x1), Cobalt (x12), Lithium (x7), Molybdenum (x1), Sulfate (x1)
Cliffside	Cliffside	Duke Energy	3 unlined ponds, 1 landfill	Arsenic (x9), Beryllium (x2), Boron (x1), Cobalt (x38), Radium 226+228 (x1), Selenium (x1), Sulfate (x1), Thallium (x1)
Dan River	Eden	Duke Energy	2 unlined ponds, 1 landfill	Arsenic (x3), Cobalt (x1), Lithium (x3)
H.F. Lee	Goldsboro	Duke Energy	1 unlined pond	Arsenic (x61), Boron (x2), Cobalt (x4), Lithium (x9), Molybdenum (x2)
Halifax County Ash Landfill	Littleton	Halifax County	1 landfill	Unsafe levels of beryllium[a]
L.V. Sutton	Wilmington	Duke Energy	2 unlined ponds, 1 landfill	Arsenic (x44), Boron (x2), Cobalt (x4), Lithium (x13), Molybdenum (x7)
Marshall	Terrell	Duke Energy	1 unlined pond, 1 landfill	Arsenic (x5), Barium (x1), Beryllium (x1), Boron (x5), Cobalt (x22), Lithium (x2), Radium 226+228 (x2), Thallium (x1)
Mayo	Roxboro	Duke Energy	3 unlined ponds, 1 landfill	Arsenic (x1), Boron (x3), Cobalt (x3), Lithium (x9), Molybdenum (x2), Radium 226+228 (x2)
Roxboro	Semora	Duke Energy	5 unlined ponds, 1 landfill	Arsenic (x2), Boron (x27), Cobalt (x6), Lithium (x29), Molybdenum (x56), Radium 226+228 (x1), Selenium (x3), Sulfate (x7)
W.H. Weatherspoon	Robeson County	Duke Energy	1 unlined pond	Boron (x1), Radium 226+228 (x3)

[a] Based on industry monitoring data. *See* Ashtracker.org.

For more information on regulated coal ash dumpsites in North Carolina, see earthjustice.org/coalash/map.

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Table 2: 10 Unregulated Coal Ash Legacy Ponds and Inactive Landfills in North Carolina (ash dumps exempted from the 2015 Coal Ash Rule)[6]

Coal Plant or Landfill	City	Probable Owner / Source	# of Unregulated Ponds	# of Unregulated Landfills	Evidence of Site Contamination[7]
Belews Creek	Belews Creek	Duke Energy	0	1	Yes – EPA damage case
Cape Fear	Moncure	Progress Energy Carolinas Inc.	5	0	Yes – EPA damage case
Marshall	Sherrills Ford	Duke Energy	0	2	Yes – Industry data[a]
Riverbend	Mt. Holly	Duke Energy	2	0	Yes – Ashtracker[b]

[a] All data derived from the utilities' publicly accessible CCR Compliance Data and Information websites, and exceedances were calculated by Environmental Integrity Project

[b] Based on industry monitoring data. *See* Ashtracker.org.

Endnotes

[1] Earthjustice and Environmental Integrity Project, "Poisonous Coverup, The Widespread Failure of the Power Industry to Clean Up Coal Ash Dumps," *available at* https://earthjustice.org/document/poisonous-coverup.

[2] American Coal Ash Association, 2020 CCP Production and Use Survey Report, https://acaa-usa.org/wp-content/uploads/2021/12/News-Release-Coal-Ash-Production-and-Use-2020.pdf.

[3] Endnote 1, *supra*, at Table A4, Summary of Contamination by Site.

[4] *See* endnote 1, *supra*, for more information re widespread utility non-compliance with the 2015 Coal Ash Rule.

[5] All data derived from the utilities' publicly accessible CCR Compliance Data and Information websites, and exceedances were calculated by Environmental Integrity Project.

[6] These data were developed by using EPA datasets relied upon in their 2007 and 2014 CCR risk assessments (Human and Ecological Risk Assessment of Coal Combustion Residuals) and comparing those datasets to the universe of regulated units.

[7] "EPA damage case" denotes a site where US EPA has found documented groundwater contamination from coal ash. See: https://www.regulations.gov/document/EPA-HQ-RCRA-2009-0640-12123.

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