

TOXIC COAL ASH IN KENTUCKY

Addressing Coal Plants' Hazardous Legacy

Kentucky has 68 coal ash dumpsites.

For decades, utilities disposed of coal ash – the hazardous substance left after burning coal for energy – by dumping it in unlined ponds and landfills. 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 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.

Kentucky is one of the nation's top coal ash-generating states, ranking fourth in ash production in 2020.³ Kentucky utilities operate **43 federally regulated coal ash ponds and landfills** at 15 plants that contain in total more than 200 million cubic yards of toxic waste (Table 1). Coal ash has caused significant groundwater contamination at all of Kentucky's regulated dumpsites, and a third of the plants are in the top 25% of the nation's most contaminated ash sites. Most Kentucky plants – 86%

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

– are located in areas that are disproportionately poor or nonwhite or both. Kentucky utilities have failed to initiate any plant-wide cleanups to restore water resources despite the legal requirement to do so.

In addition, Kentucky hosts at least **25 unregulated inactive coal ash landfills and legacy ponds** at 12 active and retired coal plants (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 Kentucky communities are protected from coal ash pollution.

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Table 1: 43 Regulated Coal Ash Disposal Sites in Kentucky

Coal Plant	City	Owner	Coal Ash Dumps	Groundwater Contamination from Coal Ash Magnitude of exceedance above federal health-based guidelines ⁵
Big Sandy	Louisa	AEP	2 unlined ponds	Beryllium (x5), Boron (x1), Cobalt (x15), Lithium (x6), Radium 226+228 (x3), Sulfate (x1)
Cane Run	Louisville	Louisville Gas & Electric	1 unlined pond	Arsenic (x2), Boron (x2), Lithium (x3), Sulfate (x1)
Cooper	Somerset	East KY Power Coop	1 landfill	Lithium (x5), Molybdenum (x1)
DB Wilson	Centertown	Big Rivers Electric	1 landfill	Cobalt (x17), Lithium (x1), Sulfate (x4)
EW Brown	Harrodsburg	KY Utilities Co	1 unlined pond, 1 landfill	Arsenic (x8), Boron (x3), Lithium (x5), Molybdenum (x4), Sulfate (x3)
East Bend	Union	Duke	1 unlined pond, 2 landfills	Lithium (x15), Sulfate (x2)
Elmer Smith	Owensboro	Owensboro Muni	1 unlined pond	Boron (x7), Lithium (x1), Molybdenum (x57), Selenium (x1), Sulfate (x1)
Ghent	Ghent	KY Utilities Co	5 unlined ponds, 1 landfill	Antimony (x1), Arsenic (x2), Beryllium (x1), Boron (x6), Chromium (x3), Cobalt (x8), Lead (x3), Lithium (x145), Molybdenum (x18), Radium 226+228 (x30), Sulfate (x3), Thallium (x1)
HL Spurlock	Maysville	East KY Power Coop	1 unlined pond, 2 landfills	Boron (x2), Mercury (x2), Molybdenum (x3), Sulfate (x1)
JK Smith	Winchester	East KY Power Coop	1 landfill	Lithium (x12), Radium 226+228 (x1), Sulfate (x2)
Mill Creek	Louisville	Louisville Gas & Electric	5 unlined ponds, 1 landfill	Arsenic (x37), Boron (x4), Lithium (x12), Molybdenum (x17), Sulfate (x3)
Paradise	Drakesboro	TVA	6 unlined ponds, 1 landfill	Arsenic (x9), Boron (x21), Molybdenum (x1)
Sebree	Robards	Big Rivers Electric	2 unlined ponds, 1 landfill	Arsenic (x2), Lithium (x35), Mercury (x135), Sulfate (x5)
Shawnee	West Paducah	TVA	1 unlined pond, 2 landfills	Boron (x2), Molybdenum (x3)
Trimble Co	Bedford	Louisville Gas & Electric	1 unlined pond, 1 lined pond, 1 landfill	Arsenic (x4), Boron (x65), Fluoride (x1), Lithium (x54), Molybdenum (x68), Selenium (x9), Sulfate (x2)

For more information on regulated coal ash sites in Kentucky and throughout the U.S., see earthjustice.org/coalash/map.

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Table 2: 25 Unregulated Coal Ash Legacy Ponds and Inactive Landfills in Kentucky (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 ^{7,8}
Big Sandy	Louisa	AEP	0	1	Yes – Industry data
Cane Run	Louisville	Louisville Gas & Elec	0	2	Yes – Industry data
DB Wilson	Centertown	Big Rivers Electric	0	1	Yes – Industry data
Dale	Ford	East KY Power Coop	3	0	Unknown – no data
Green River	Central City	Kentucky Utilities	5	0	Unknown – no data
Kenneth Coleman	Hawesville	Big Rivers Electric	3	0	Unknown – no data
KU Pineville	Pineville	LG&E and KU	1	0	Unknown- no data
Mill Creek	Louisville	Louisville Gas & Electric	0	2	Yes – Industry data, EPA damage case
Paradise	Drakesboro	TVA	0	2	Yes – industry data
Sebree	Robards	Big Rivers Electric	0	1	Unknown- no data
Shawnee	West Paducah	TVA	0	1	Yes – industry data, EPA damage case
Tyrone	Versailles	Kentucky Utilities	3	0	Unknown – no data

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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 Leading states by primary energy consumption from coal in the United States in 2020, <https://www.statista.com/statistics/189862/leading-us-states-in-energy-consumption-from-coal/>
- 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>.
- ⁸ All data derived from the utilities’ publicly accessible [CCR Compliance Data and Information websites](#), and exceedances were calculated by Environmental Integrity Project.

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