EARTHJUSTICE

TOXIC COAL ASH IN TENNESSEE

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. **Tennessee has 29 toxic 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.

Tennessee has a legacy of devastating harm from coal ash, including the massive spill at the Kingston Fossil Plant in 2008, when more than 1 billion gallons of toxic coal ash sludge burst from a dam, swept away homes, and contaminated two rivers.[3] Tennessee utilities currently operate **18 regulated coal ash ponds and landfills** at seven plants that contain nearly 53 million cubic yards (106 billion pounds) of toxic waste (Table 1). All 18 regulated dumps have caused significant groundwater contamination. The Tennessee Valley Authority (TVA) operates all the dumps, however TVA has yet to complete any comprehensive cleanups to restore water resources despite the legal requirement to do so.

In addition, TVA hosts at least **11 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. Monitoring data are not currently available for most unregulated sites in Tennessee but historical data from the EPA indicate that groundwater was contaminated prior to 2009 at eight of the 11 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

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as fill unless protective measures are put in place, to ensure all Tennessee communities are protected from coal ash pollution.

Table 1: 18 Regulated Coal Ash Disposal Sites in Tennessee

Coal Plant	City	Owner	**Coal Ash Dumps** (total coal ash in million cubic yards)	**Groundwater Contamination from Coal Ash** Magnitude of exceedance above federal health-based guidelines[5]
Allen	Memphis	TVA	1 unlined pond (> 2.5 M CY)	Arsenic (x294), Boron (x4), Fluoride (x1), Lead (x3), Molybdenum (x9)
Bull Run	Clinton	TVA	2 unlined ponds, 1 landfill (>2.3 M CY)	Arsenic (x7), Boron (x9), Cobalt (x2), Lithium (x13), Molybdenum (x5), Sulfate (x3)
Cumberland	Cumberland City	TVA	2 unlined ponds, 2 landfills (> 25.6 M CY)	Arsenic (x1), Boron (x22), Cobalt (x3), Lithium (x2), Molybdenum (x1), Sulfate (x3)
Gallatin	Gallatin	TVA	4 unlined ponds, 1 landfill (12.6 M CY)	Arsenic (x2), Boron (x6), Cobalt (x2), Lithium (x41), Molybdenum (x2), Sulfate (x1)
John Sevier	Rogersville	TVA	1 unlined pond (>660,000 CY)	Lithium (x1)
Johnsonville	New Johnsonville	TVA	2 unlined pond (> 4.9 M CY)	Boron (x4), Cobalt (x9), Sulfate (x1)
Kingston	Kingston	TVA	2 unlined ponds, 1 landfill (>4.7 M CY)	Arsenic (x16), Boron (x1), Cobalt (x20), Lithium (x10), Molybdenum (x5), Sulfate (x2)

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

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Table 2: 11 Unregulated Coal Ash Legacy Ponds and Inactive Landfills in Tennessee (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]
Allen	Memphis	TVA	0	1	Yes – EPA damage case
Bull Run	Clinton	TVA	0	2	Yes – EPA damage case
John Sevier	Rogersville	TVA	0	2	Yes – EPA damage case
Johnsonville	New Johnsonville	TVA	0	2	Yes – EPA damage case
Kingston	Kingston	TVA	0	1	Yes – EPA damage case
Watts Bar	Spring City	TVA	3	0	Unknown – No data

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] U.S. EPA, Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule, 80 Fed. Reg. 21,302 at 21,213.

[4] *See* footnote 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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