EARTHJUSTICE

TOXIC COAL ASH IN PENNSYLVANIA

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. **Pennsylvania is one of the nation's top coal ash-generating states, with 70 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.

Pennsylvania ranked ninth in the U.S. in ash production in 2020.[3] Pennsylvania utilities operate **22 federally regulated coal ash ponds and landfills** at 10 plants that contain more than 284 million cubic yards of toxic waste (Table 1). At all but one of Pennsylvania's coal plants, industry monitoring data indicate coal ash has caused significant groundwater contamination at regulated dumpsites. Pennsylvania utilities have failed to initiate any plant-wide cleanups to restore water resources despite the legal requirement to do so.

The number of unregulated coal ash dumps in Pennsylvania is more than double the number that are regulated. Pennsylvania utilities host at least **48 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 in May 2023 and unregulated landfills, a concern remains that the agency will not address coal ash that was dumped off site or used as fill – as often occurred in Pennsylvania.

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 Pennsylvania communities are protected from coal ash pollution.

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Table 1: 22 Regulated Coal Ash Disposal Sites in Pennsylvania

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]
Bruce Mansfield	Shippingport	Energy Harbor Gen	1 unlined pond (> 129 M CY)	Arsenic (x7), Barium (x13), Boron (x2), Lithium (x8), Molybdenum (x1), Sulfate (x5)
Brunner Island*	York Haven	Talen Energy	1 unlined pond, 1 landfill (4.1 M CY)	Arsenic (x23), Cobalt (x14), Lithium (x5), Molybdenum (x8), Sulfate (x1)
Cheswick	Cheswick	GenOn	2 unlined ponds, 1 landfill (3.7 M CY)	Boron (x1), Lithium (x1), Molybdenum (x2)
Conemaugh	New Florence	GenOn	4 unlined ponds, 1 landfill (67 M CY)	Cobalt (x18), Sulfate (x2)
Hatfield's Ferry	Masontown	Energy Harbor Gen	1 landfill (16.4 M CY)	Boron (x8), Cobalt (x49), Sulfate (x4)
Homer	Homer City	NRG	1 landfill (20.6 M CY)	Lithium (x5)
Keystone	Shelocta	GenOn	2 unlined ponds, 1 lined pond, 1 landfill (> 29M CY)	Historical industry data indicate exceedances of arsenic, cadmium, chromium, lead, manganese, selenium, sulfate[6]
Montour	Washingtonville	Talen Energy	1 unlined pond, 1 landfill (> 14.5 M CY)	Cobalt (x3), Lithium (x4), Sulfate (x3)
New Castle	West Pittsburg	GenOn	1 unlined pond, 1 landfill (1.4 M CY)	Arsenic (x372), Boron (x4), Cobalt (x5), Lithium (x54), Molybdenum (x1), Sulfate (x3)
Sunbury	Shamokin Dam	Sunbury Gen	1 unlined pond (> 1.9 M CY)	Data not evaluated

* This plant operates inactive coal ash ponds at the facility but has not reported the ponds on its CCR Rule Compliance Data and Information website nor has the owner complied with the CCR rule's requirements that apply to these ponds, including groundwater monitoring, closure, and corrective action. This is also the case at GenOn's Shawville Plant in Woodland, PA.

For more information on federally regulated coal ash sites in Pennsylvania, *see* earthjustice.org/coalash/map.

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Table 2: 48 Unregulated Coal Ash Legacy Ponds and Inactive Landfills in Pennsylvania (ash dumps exempted from the 2015 Coal Ash Rule)[7]

Coal Plant or Landfill	City	Probable Owner / Source	# of Unregulated Ponds	# of Unregulated Landfills	Evidence of Site Contamination
Conemaugh	New Florence	GenOn	0	2	Yes – Industry data[b]
Elrama	Elrama	GenOn Power MW LP	4	0	Unknown - no data
Fern Valley Landfill (Received ash from Elrama plant)	Elrama	Orion Power Holdings	0	1	Yes – EPA damage case[c]
Armstrong	Washington Twp	Allegheny Energy Supply	0	2	Unknown – no data
Mitchell	Courtney	Allegheny Energy Supply	2	2	Yes – EPA damage case[c]
Mt Carmel Cogen	Mt Carmel	Mt Carmel Cogen Inc	0	1	Unknown – no data
Hatfield's Ferry	Masontown	Energy Harbor Gen	0	1	Yes – EPA damage case[c]
Holtwooda	Holtwood	PPL Holtwood, LLC	1	0	Unknown – no data
Homer City	Homer City	NRG	0	2	Yes – Industry data[b]
Hunlock	Hunlock Creek	Allegheny Energy Supply	2	0	Yes – EPA damage case[c]
Keystone	Shelocta	GenOn	0	3	Yes – Industry data[b]
Portland	Mt Bethel	GenOn REMA LLC	3	4	Yes – EPA damage case[c]
Martins Creek	Bangor	Talen Energy	4	0	Yes – EPA damage case[c]
Montour	Washingtonville	Talen Energy	0	1	Yes – Industry data[b]
Shawville	Woodland	GenOn REMA LLC	0	2	Unknown – no data

(Table continues on the next page)

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Table 2, continued: 48 Unregulated Coal Ash Legacy Ponds and Inactive Landfills in Pennsylvania (ash dumps exempted from the 2015 Coal Ash Rule)[7]

Coal Plant or Landfill	City	Probable Owner / Source	# of Unregulated Ponds	# of Unregulated Landfills	Evidence of Site Contamination
Sunbury[a]	Shamokin Dam	Sunbury Gen	0	2	Unknown – no data
Titus	Birdsboro	GenOn REMA LLC	2	4	Unknown – no data
Frackville	Frackville	Wheelbrator Env'tl	1	0	Unknown – no data
Westwood Gen	Tremont	WPS Power Development	0	1	Unknown – no data

[a] Data on these unregulated landfills and ponds found in Inventory of Chesapeake Bay Watershed Coal Ash Deposits (December 2021).

[b] Historical industry monitoring data is the basis of the finding of contamination. *See* Ashtracker.org.

[c] "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.

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] *See*, Ashtracker.org.

[7] 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.

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