

## Coal Ash Threatens Iowa's Groundwater

Once coal is burned, it leaves behind coal combustion waste, also known as coal ash. Fly ash accumulates in the smoke stack. Bottom ash is found at the bottom of the boiler. Combustion waste also includes particles that are captured by scrubbers, bag houses, and other pollution control measures. Coal ash is stored in ponds and buried in landfills.

### The Problem

Coal ash contains a slew of toxic chemicals that are harmful to people, including lead, mercury, arsenic, boron, and selenium. These chemicals can leach from the landfill site and move into the groundwater. Groundwater pollution can easily travel from the source, contaminating private and public drinking water supplies.



Prairie Creek Generating Station, Cedar Rapids, Iowa, a coal-fired power plant. Photo credit: Elwood Garlock

In 2022, the Environmental Integrity Project and Earthjustice listed the locations where coal ash has contaminated groundwater.<sup>1</sup> The sites in Iowa include:

Facility	County	Operator	Pollutant
City of Ames Municipal Electric System	Story	City of Ames	Molybdenum, Sulfate
Burlington Generating Station	Des Moines	Alliant Energy	Arsenic, Boron, Lithium, Molybdenum, Sulfate
Lansing Generating Station	Allamakee	Alliant Energy	Arsenic, Boron, Molybdenum
Louisa Generating Station	Muscatine	MidAmerican Energy	Molybdenum, Sulfate
M.L. Kapp Generating Station	Clinton	Alliant Energy	Molybdenum, Sulfate
Muscatine Power & Water CCR Landfill	Muscatine	Muscatine Power and Water	Barium, Boron, Sulfate, Thallium
Neal North Energy Center	Woodbury	MidAmerican Energy	Arsenic, Boron, Cobalt, Lithium, Molybdenum, Selenium, Sulfate
Neal South Energy Center	Woodbury	MidAmerican Energy	Arsenic, Boron, Cobalt
Ottumwa Generating Station	Wapello	Alliant Energy	Cobalt, Sulfate
Prairie Creek Generating Station	Linn	Alliant Energy	Arsenic, Boron, Molybdenum
Sutherland Generating Station	Marshall	Alliant Energy	Arsenic, Boron, Sulfate
Walter Scott Jr. Energy Center	Pottawattamie	MidAmerican Energy	Arsenic, Boron, Lithium, Molybdenum, Sulfate

<sup>1</sup> Brittney J. Miller, "Report: Toxins leaking from 12 Iowa coal storage sites", Cedar Rapids Gazette, November 4, 2022

In January, 2022, the Environmental Protection Agency issued a proposed denial of the permit for the Ottumwa Generating Station's coal ash pond, which would require an early closure of the coal ash pond.<sup>2</sup> In June of 2022, Alliant Energy responded that they would be closing the coal ash pond.<sup>3</sup>

### **Coal Gasification Sites Have Contaminated Local Communities**

Several retired coal gasification sites have been placed on the National Priority List for the Superfund hazardous waste cleanup program, the Superfund Alternative Approach List, or is on the list of sites identified for the Not National Priority List.<sup>4</sup>

- Fairfield Coal Gasification Plant, in Fairfield, owned by Alliant Energy, is on the National Priority List
- Iowa City Former Manufactured Gas Plant, Iowa City, owned by Iowa Illinois Square, it is the site of 54 apartments, it is on the Superfund Alternative Approach List
- Mason City Coal Gasification Plant, in Mason City, owned by Alliant Energy, is on the National Priority List
- Peoples Natural Gas Company, in Dubuque, now owned by the City of Dubuque and Iowa Department of Transportation, is on the National Priority List
- Waterloo Coal Gasification Plant, in Waterloo, site owned by MidAmerican Energy, is proposed to be placed on the National Priority List
- LeMars Coal Gas Plant, in LeMars, on the Not National Priority List
- Stuart Street PCE, in Clarinda, on the Not National Priority List
- Citizens Gas and Electric Company, in Council Bluffs, on the Not National Priority List
- Clinton Coal Gas, in Clinton, on the Not National Priority List
- Clinton Coal Gas – Status, in Clinton, on the Not National Priority List

Additionally the Iowa Department of Natural Resources keeps track of hazardous waste disposal sites and issues an annual report.<sup>5</sup> The Department is tracking a number of sites related to coal and coal gasification, including

- Iowa Falls Coal Gas, in Hardin County
- Fairfield Coal Gasification Plant, in Jefferson County
- Davenport Coal Gas, in Scott County

### **Common Sense Solutions<sup>6</sup>**

Since 2015, new coal ash landfills and must have composite liners. The older sites were not required to have a liner, which makes the site vulnerable to leaking as it ages.

The Iowa Chapter supports:

- Regular monitoring of groundwater near landfill sites where coal ash is buried as well as near coal ash ponds.
- Regularly encouraging owners of private drinking water wells located near coal ash landfill sites to have their water tested for the presence of the toxins that leach from coal ash.

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<sup>2</sup> See Environmental Protection Agency, News Release, "EPA Takes Key Steps to Protect Groundwater from Coal Ash Contamination", January 11, 2022

"Coal Combustion Residuals (CCR) Part A Implementation", [www.epa.gov/coalash/coal-combustion-residuals-ccr-part-implementation](http://www.epa.gov/coalash/coal-combustion-residuals-ccr-part-implementation)

Environmental Protection Agency, "Proposed Denial of Alternative Closure Deadline for Ottumwa Generating Station", Docket EPA-HQ-OLEM-2021-0593

<sup>3</sup> Notice from Jeff Maxted, Alliant Energy, July 1, 2022, to Environmental Protection Agency, "Notification of Intent to Close Coal Combustion Residuals Surface Impoundment, Ottumwa Generating Station – Main Ash Pond, Interstate Power and Light Company"

<sup>4</sup> The sites currently on the superfund list can be found at [www.epa.gov/superfund/sites/query/queryhtm/nplfin.htm#IA](http://www.epa.gov/superfund/sites/query/queryhtm/nplfin.htm#IA)

<sup>5</sup> [www.iowadnr.gov/Environmental-Protection/Land-Quality/Contaminated-Sites/Haz-Waste-Sites-Registry](http://www.iowadnr.gov/Environmental-Protection/Land-Quality/Contaminated-Sites/Haz-Waste-Sites-Registry)

<sup>6</sup> The Iowa rules regulating coal combustion residue landfills is found in the Iowa Administrative Code Part 567, Chapter 103.

- Requiring dust controls at coal ash landfill sites including a daily cover of the active coal ash landfill sites. Iowa law does not require dust controls at coal ash landfill sites nor does it require daily cover of the coal ash landfill sites.<sup>7</sup>
- Establishing an indemnity fund to provide for clean-up costs if the groundwater becomes contaminated with the toxins leached from the buried coal ash.
- Developing a plan so that contamination of ground water can be dealt with in a timely manner, including providing drinking water for those private wells that become contaminated and for removing the contamination source.
- Establishing an inventory of all of the sites in Iowa that have been used for coal ash disposal, particularly old sites that have been capped for decades. This includes sites used by industrial operations, such as ethanol plants and manufacturing plants, as well as electric power plants. The Iowa Department of Natural Resources maintains a list of permitted coal combustion waste landfills that are currently open as well as those that are closed.<sup>8</sup>
- Stopping the creation of more coal combustion waste by migrating to clean renewable energy such as wind, solar, battery storage, geothermal and implementing energy efficiency and conservation projects.

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<sup>7</sup> "Iowa and Coal Ash Disposal in Ponds and Landfills," Earthjustice

<sup>8</sup> Access the list of permitted coal combustion residue landfill sites at <https://programs.iowadnr.gov/solidwaste/reports/facilitiesdirectory>