EARTHJUSTICE

Minnesota and Coal Ash Disposal in Ponds and Landfills

Summary of Coal Ash Generating Facilities in MN

Plant[i]	Operator	Site	County
Black Dog Power Station	Northern States Power Co.	4 unlined ponds	Dakota
Clay Boswell Power Station	Minnesota Power Inc.	8 ponds (5 significant hazard/3 landfills (2 ponds rated "poor")[ii] (1 unit unlined)	Itasca
Fox Lake Generating Station	Interstate Power & Light Co.	1 pond	Martin
NSP-M Minnesota Valley Plant	Xcel Energy	4 ponds	Granite Falls
Riverside Power Station (NSP)	Northern States Power Co.	1 pond/landfill*	Hennepin
Sherburne County Power Station	Northern States Power Co.	2 significant hazard ponds/1 landfill	Sherburne
Syl Laskin	Minnesota Power Inc.	2 ponds (1 significant hazard)	St. Louis
Allen S. King	Northern States Power Co.	3 ponds/1 landfill (one unit unlined)	Washington
High Bridge	Northern States Power Co.		Ramsey
Taconite Harbor Energy Center	Minnesota Power Inc.	5 ponds	Cook
Silver Bay Power Co.	Cleveland Cliffs Inc.	landfill*	Lake
Hoot Lake	Otter Tail Power Co.	8 ponds	Otter Tail
Austin Northeast	City of Austin	1 unlined landfill	Mower
Hibbing	Hibbing Public Utilities Comm		St. Louis
Silver Lake	Rochester Public Utilities		Olmsted
Virginia	City of Virginia		St. Louis
Willmar	Willmar Municipal Utilities		Kandiyohi

*indicates one or more coal ash landfills.[iii]

Amount of coal ash generated per year: MN utilities generate over 1.5 million tons annually. MN ranks 26th in the country for coal ash generation and hosts 17 coal-fired power plants.[iv]

Coal Ash Ponds in MN

Number of Coal Ash Ponds: 34 ponds at 10 plants.[v] At least 3 ponds are "retired" or "legacy" ponds.
Pond Ratings: Nine coal ash ponds in Minnesota are rated "significant hazard."[vi] This ranking indicates that a failure at the pond can cause economic loss, environmental damage, or damage to infrastructure.[vii]
Age of Ponds: 17 ponds are over 30 years old and 5 of those are over 40 years old.[viii] The age of these ponds makes it unlikely that they have safeguards like liners and leachate collection systems.
Capacity: According to EPA, 21 of the 34 ponds in MN cover an area of over 2,497 acres. The 19 ponds for which EPA has storage data can store up to 27,611 acre-feet--nearly 9 billion gallons.
Pond releases: EPA notes 3 pond releases: (1) Clay Boswell Power Station in 2008, when coal ash overflowed into a nearby lake; (2) Sherburne County Power Station in 2007, involving a 600-gallon spill; (3) Sherburne County Power Station in 2008 in which 8,000 gallons were discharged onto the ground.[ix]

Minnesota's Failure to Ensure the Structural Stability of Coal Ash Dams:

• MN regulations do not ensure the safety of moderate-sized coal ash dams—ponds smaller than 6 feet or 15 acre-feet; or 25 feet and 50 acre-feet are not regulated by the state.[x]

• MN regulations to not require any safety or structural integrity inspections be performed by the dam operator;
• MN regulations require only infrequent inspection by regulators, depending on hazard classification, inspections are required every 1-8 years.[xi]
• MN regulations do not require inundation mapping to determine the area that would be impacted by a spill;
• Coal ash dams in MN do not have to meet specific design standards and specifications;
• MN regulations do not require a bond or any financial assurance to ensure that funds are available for clean up in the event of a failure.
• MN does not require Emergency Action Plans for every dam, but only "Warning Procedures" for high hazard dams.[xii]

Unsafe Conditions found at MN Coal Ash Dams: EPA found two significant hazard dams at the Clay Boswell Power Station in Cohasset, MN in "POOR" condition after a 2010 inspection. EPA recommended that geotechnical and stability analyses be performed to determine structural stability. One of the significant hazard ponds rated "POOR" is a "legacy" pond.

Deficiencies in MN Coal Ash Regulations:
Minnesota regulations do not adequately protect health and the environment from the toxic substances in coal ash. State regulations: (1) fail to require all coal ash ponds and landfills to conduct monitoring of groundwater for leaks; (2) fail to require all new ponds and landfills to install composite liners to prevent migration of hazardous substances; and (3) fail to require all coal ash ponds and landfills to have financial assurance (bonds) sufficient to cover cleanup costs if contamination occurs.

Documented Damage at Coal Ash Disposal Sites:
At the Sherburne County Generating Plant, EPA[xiii] found groundwater exceeded federal drinking water standards for arsenic, cadmium, chromium, fluoride, lead, and nitrate and secondary drinking water standards for chloride, copper, iron, manganese, sulfate, and zinc.

At the Boswell Energy Center, groundwater monitoring data show a history of exceedances of state and/or federal standards for boron and sulfate.

An additional contaminated site—the Big Stone power plant in South Dakota—is located near the Minnesota border. The Big Stone plant contaminated groundwater with arsenic, boron, lead, strontium, and sulfate. Big Stone City, South Dakota now imports drinking water from Ortonville, MN.[xiv]

Coal Ash and Environmental Justice in Minnesota*:* Statewide in Minnesota, low-income individuals are over-represented in zip codes hosting coal fired power plants by 43%.

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[i] U.S. EPA. Database of coal combustion waste surface impoundments (2011). Information collected by EPA from industry responses to Information Collection Request letters issued to the companies. Available at http://www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys/index.htm.
[ii] EPA inspection 2009-11. www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys2/index.htm
[iii] U.S. DOE's Energy Information Administration, Form EIA-767, Annual Steam-Electric Plant Operation and Design Data. 2005.
[iv] U.S. EPA and U.S. DOE. *Coal Combustion Waste Management at Landfills and Surface Impoundments, 1994-2004* (August 2006).
[v] U.S. EPA. Database of coal combustion waste surface impoundments (2009).
[vi] *Id.*
[vii] U.S. EPA, Coal Combustion Residuals Impoundment Assessment Reports, http://www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys2/
[viii] U.S. EPA. Database of coal combustion waste surface impoundments (2009).
[ix] U.S. EPA. Database of coal combustion waste surface impoundments (2009).
[x] Minn. R. 6115.0320(5).
[xi] Minn. R. 6115.0490.
[xii] Minn. R. 6115.0490.
[xiii] U.S. EPA, Office of Solid Waste. *Coal Combustion Waste Damage Case Assessments* (July 9, 2007).

[xiv] EIP, Earthjustice and Sierra Club, In Harm's Way: 184-189 (2010).