EARTHJUSTICE

NORTH DAKOTA COAL ASH DISPOSAL, CONTAMINATED SITES AND REGULATORY GAPS

Summary of Coal Ash Generating Facilities in ND[i]

FACILITY	OPERATOR	ONSITE DISPOSAL	COUNTY
Coal Creek	Great River Energy	2 ponds and landfill	McLean
Antelope Valley	Basin Electric Power Coop	2 ponds and landfill	Mercer
Leland Olds	Basin Electric Power Coop	4 ponds and landfill	Mercer
Milton R Young	Minnkota Power Coop Inc	4 ponds and landfill	Oliver
Coyote	Otter Tail Power Company	3 ponds landfill	Mercer
Stanton	Great River Energy	3 ponds and landfill	Mercer
R M Heskett	MDU Resources Group	landfill	Morton
W.J. Neal	Basin Electric	closed pond	McHenry

landfill= one or more landfills onsite

Amount of coal ash generated per year*:* North Dakota electric utilities generate 3 million tons of coal ash annually. North Dakota ranks 14th nationally for coal ash generation.[ii]

Coal Ash Ponds in North Dakota

Number of Coal Ash Ponds: 18 ponds at six plants.

Age of Ponds: Ten of the 18 ponds in North Dakota are more than 30 years old, while the average age of all ponds is 31.[iii] The age of these ponds makes it unlikely that they have critical safeguards like composite liners and leachate collection systems.

Size and Quality of Ponds: The ponds in North Dakota have a collective storage capacity of 5,232 acre feet and cover 328 acres. The average height of these units is 19.9 feet, including one pond at Coal Creek Station that is 75 feet high (7.5 stories tall).[iv] Five of the ponds are rated "significant" hazard, indicating that failure of these ponds can cause economic loss, environmental damage, or damage to infrastructure.[v] Three of them have been identified by EPA has being in "poor" condition after inspections by EPA contractors.[vi]

Coal Ash Landfills in North Dakota

Seven coal-fired power plants in North Dakota store waste in onsite landfills. In 2005, these facilities stored a collective 998,300 tons of fly ash, 340,400 tons of bottom ash, 333,500 tons of sludge and 64,200 tons of other coal combustion byproducts in onsite landfills.[vii]

Coal Ash Contamination in North Dakota

North Dakota has six documented sites where coal ash has contaminated water:

W.J. Neal Station: EPA identified W.J. Neal as a "proven damage case" in 2007 because of historical groundwater and surface water contamination. A marshy area adjacent to the facility was contaminated with antimony, arsenic, chromium, manganese, selenium, and sodium. Several pollutants found in groundwater, including arsenic, aluminum, cadmium, lead, and zinc exceeded federal drinking water standards or Maximum Contaminant Levels (MCLs). The cadmium, lead, and zinc exceedances occurred in a public water supply well.[viii]

Coal Creek Station: EPA also identified Coal Creek station as a "proven damage case" of coal ash contamination because of a history of severe leaks from onsite evaporation and storage ponds. Groundwater exceeded MCLs for selenium, arsenic, sulfate, and chloride.[ix]

R.M. Heskett Station: EPA determined that downgradient groundwater near an old ash pile at the power plant showed elevated levels of sulfate and boron.[x]

Coyote Station: Groundwater monitoring data obtained from EPA through a Freedom of Information Act Request revealed exceedances of state and/or federal standards for iron, arsenic, manganese, sulfate, pH, and TDS. These exceedances occurred in both upgradient and downgradient wells over the last five years, so causation is not certain.

Antelope Valley: A closed, clay-lined coal ash landfill at Antelope Valley has contaminated underlying groundwater with arsenic to more than three times the MCL. There are two public water supplies within five miles of the plant.[xi]

Leland Olds: On-site groundwater underneath clay-lined, decommissioned ash ponds is contaminated with arsenic at nearly eight times and lead at nearly five times MCLs. Groundwater at Leland Olds also contains elevated selenium and boron. Fish and irrigation water from the Missouri River could be at risk.[xii]

North Dakota Regulatory Gaps Leave Communities Unprotected:

North Dakota regulations do not adequately protect public health and the environment from the toxic substances in coal ash because they do not require basic safeguards at coal ash dumps. 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; (3) fail to prohibit construction of coal ash dumps directly in the water table; and (4) fail to require all coal ash ponds and landfills to have financial assurance (bonds) sufficient to cover cleanup costs if contamination occurs. Furthermore, North Dakota fails to require any inspection of coal ash ponds by state regulators or owner/operators, nor do the regulations require emergency response plans in the event of a failure.

For more information, contact Lisa Evans, Earthjustice, levans@earthjustice.org, 781-631-4119.

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[i] Information Request Responses from Electric Utilities, U.S. ENVT'L PROT. AGENCY (Jan. 13, 2012), http://www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys/ (follow link to Database Results (XLS)) ("Database"); U.S. Dept. of Energy's Energy Information Administration, Form EIA-767, Annual Steam-Electric Plant Operation and Design Data. 2005.

[ii] U.S. Dept. of Energy's Energy Information Administration, Form EIA-767, Annual Steam-Electric Plant Operation and Design Data. 2005.

[iii] Database

[iv] *Id.*

[v] Coal Combustion Residuals Impoundment Assessment Reports: Summary Table for Impoundment Reports , U.S. ENVT'L PROT. AGENCY (Oct. 12, 2011), http://www.epa.gov/osw/nonhaz/industrial/special/fossil/surveys2/ (follow link to Summary Table for Impoundment Reports (XLS))

[vi] *Id.*

[vii] U.S. Dept. of Energy's Energy Information Administration, Form EIA-767, Annual Steam-Electric Plant Operation and Design Data. 2005.

[viii] U.S. EPA. Coal Combustion Waste Damage Case Assessments 35-6 (July 9, 2007).

[ix] *Id.* at 36.

[x] *Id.* at 56-7.

[xi] Environmental Integrity Project, Earthjustice and Sierra Club. In Harm's Way: Lack of Federal Coal Ash Regulations Endangers Americans and Their Environment xix (Aug. 2010).

[xii] *Id.*