EARTHJUSTICE CLEAN WATER ACTION

Coal Ash in Michigan

Coal-Fired Power Plants in Michigan[i]

How Safe Are Michigan's Coal Ash Dumps?

Plant	Operator	# of land_ fills	# of ponds	Average age of ponds/ landfills	Units with liners*	Pond Rating**	Condition	Location
B C Cobb	Consumers Energy Co.		11 (1 retired)	Unknown	0		unknown	Muskegon
Belle River	Detroit Edison Co.	1	4	35	5		unknown	East China
Dan E Karn	Consumers Energy Co.	1	1	Unknown	0		Satifactory	Essexville
Eckert Station	Lansing Board of Water and Light			Unknown			unknown	Lansing
Endicott Station	Michigan South Central Power Agency			Unknown			unknown	Litchville
Erickson Station	Lansing Board of Water and Light		2	39	1		unknown	Lansing
Escanaba	Upper Pensinsula Power Co.			Unknown			unknown	Escanaba
Harbor Beach	Detroit Edison Co.		3	Unknown	0		unknown	Harbor Beach
J B Sims	City of Grand Haven		3	Unknown	2	2 significant	POOR	Grnd Haven
J C Weadock	Consumers Energy Co.	1	1	Unknown	0		Satisfactory	Essexville
J H Campbell	Consumers Energy Co.	7	5	Unknown	0		unknown	West Olive
J R Whiting	Consumers Energy Co.	2	6	55	0	3 significant	unknown	Eerie
James De Young	City of Holland	1	1	Unknown	0		unknown	Holland
Monroe Power Station	Detroit Edison Co.		2	39	1	1 significant	unknown	Monroe
Presque Isle	We Energies	3	1	27	2		unknown	Marquette
River Rouge	Detroit Edison Co.		1	56	1		unknown	River Rouge
Shiras	City of Marquette		1	Unknown	0		unknown	Marquette
St Clair	Detroit Edison Co.		4	42	4		unknown	East China Township
Trenton Channel	Detroit Edison Co.	1	2	Unknown	0		unknown	Trenton
White Pine Electric Power	White Pine Electric Power			Unknown			unknown	White Pine
Total # of Plants 23		**17**	**48**[****]	42	16			

*Presence of a "liner" does not mean that it is adequate to prevent contaminants from leaking. Inadequate "liners" may be constructed of soil, ash, clay or single layers. Information is not sufficient to determine liner adequacy.
**Hazard and condition ratings not available for all units.
**** The total of 46 ponds, recently identified by EPA in July 2012, represents a significant increase from the 18 ponds previously identified by EPA. *See* U.S. EPA, Response to Freeedom of Information Act Request, Database (July 26, 2012). Out of the 46 documented impoundments, 46 are open and 2 are closed.[ii]

Amount of coal ash generated per year in Michigan: Over 1.7 million tons. MI ranks 20th in the country for coal ash generation.[iii]

Documented Unsafe Conditions at Michigan Coal Ash Dams

• J.R. Whiting Power Station: According to an EPA inspection, the buttressing of the facility's significant hazard dam was constructed from bottom ash. In addition, Pond 5 was added around 1972 and was constructed with a core of bottom ash and outer clay shell. Given the close proximity to Lake Erie and the fact that the embankments were raised using ash material, it is the belief of the EPA inspection team that the quantity of material that could be released into Lake Erie in the event of a breach could result in significant environmental damage.

• J.B. Sims Power Plant, Grand Haven, MI: In 2012, EPA found two significant hazard dams were found in "poor" condition at the facility. EPA did not find engineering documentation of structural stability and found that the surveillance and monitoring programs were inadequate. According to EPA, "Both the East Pond and West Pond are rated POOR for continued safe and reliable operation due to the lack of technical information on the design, lack of seismic and dam slope stability safety analyses, lack of hydrologic information and analyses, and lack of formal maintenance procedures."

Documented Contamination at Coal Ash Disposal Sites in Michigan:

- J.H. Campbell Power Plant, West Olive: Groundwater monitoring data show exceedances of state and/or federal standards for pH, antimony, boron, cadmium, chromium, iron, lead, selenium, vanadium, aluminum, nickel, thallium, manganese, and zinc.[iv]
- J.R. Whiting Generating Plant, Erie: A U.S. Fish and Wildlife Service study found that aquatic life in Lake Erie was harmed by discharges with high selenium, arsenic and other metal concentrations from a leaking coal ash basin.[v]
- Monroe Power Plant impoundment , Monroe**:** Monitoring data shows exceedances of MCL thresholds for arsenic and sulfate.
- Presque Isle Power Plant landfill, Marquette: Groundwater contamination with boron and lithium
- Belle River's and St. Claire's Power Plant Range Road landfill, China Township**:** Groundwater and surface water contamination with high levels of dangerous contaminants like boron, manganese, and sulfate.[vi]
- Lansing Board of Water & Light (LBWL) North Lansing Landfill. This site was classified as a proven damage case by US EPA based on a scientific observation of off-site exceedances of the State's health-based standard for lithium.
- Karn/Weadock Generating Facility, Saginaw: Groundwater monitoring detected extremely high levels of boron and arsenic more than 99 times the federal drinking water standard in the groundwater surrounding the site. Studies found that the landfills are a major contributor of arsenic to the Saginaw Bay Area.[vii]
- BC Cobb landfill, Muskegon; Groundwater contamination with on-site exceedences for boron and lithium.
- Muskegon County Landfill, Muskegon: Documented on-site groundwater contamination of boron and manganese.
- Pine Hill Landfill, Marquette: Documented on-site groundwater contamination of boron and lithium.
- Warden Station, L'anse Township: Documented groundwater and surface water contamination with boron and lithium.

- River Rouge Plant Sibley Quarry impoundment, River Rouge: Monitoring wells indicate thresholds exceeded for boron, sulfate, chloride, and selenium. Over 212 pounds of Copper, Lead and Barium discharged into surface waters every year.

Deficiencies of the Michigan Regulatory Program:

Dam Safety Deficiencies:

• Michigan does not require state regulators to conduct any regular inspections of its coal ash ponds for structural stability;
• Michican requires only infrequent inspections by facility owners- every 3-5 years based on hazard classification.[viii]
• Michgan does not require frequent visual inspections by operators of coal ash dams to ensure early warnings of failure are detected and reported;
• Michgan does not require regular reporting of dam condition to state regulators.

Failure to Protect Water Quality:

•Michigan state regulations also fail to require coal ash ponds and landfills to maintain basic safeguards to prevent the migration of harmful contaminants.
• State regulations fail to require all new and existing coal ash ponds and landfills to monitor groundwater around disposal units.
• State regulations also fail to require composite liners for all new ponds and landfills.
• State regulations do not even prohibit coal ash ponds from being constructed directly in the water table.
• Lastly, at most disposal sites, utilities do not test for all groundwater contaminants of concern such as hexavalent chromium.[ix]

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[i] U.S. Department of Energy's Energy Information Administration, Form EIA-767, Annual Steam-Electric Plant Operation and Design Data. 2005, available at http://www.eia.gov/cneaf/electricity/page/eia767/; 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)); Data from US EPA Office of Water, Information Collection Request. Data received from US EPA pursuant to FOIA, July 2012.

[ii] Clean Water Action. *Toxic Trash Exposed: Coal Ash Pollution in Michigan, October 2013, available at* http://www.cleanwaterfund.org/mitoxictrashexposed

[iii] U.S. Department of Energy's Energy Information Administration, Form EIA-767, Annual Steam-Electric Plant Operation and Design Data. 2005, available at http://www.eia.gov/cneaf/electricity/page/eia767/.

[iv] EIP. *Third Damage Report*. December 12, 2011, available at http://www.environmentalintegrity.org/documents/121311EIPThirdDamageReport.pdf

[v] EIP, Earthjustice,Sierra Club. *In Harm's Way: Lack of Federal Coal Ash Regulations Endangers Americans and their Environment*, August 26, 2010, available at http://earthjustice.org/sites/default/files/files/report-in-harms-way.pdf.

[vi] Clean Water Action. *Toxic Trash Exposed: Coal Ash Pollution in Michigan, October 2013, available at* http://www.cleanwaterfund.org/mitoxictrashexposed

[vii] EIP and Earthjustice. *Out of Control: Mounting Damages from Coal Ash Waste Sites*, February 24, 2010, available at http://earthjustice.org/sites/default/files/library/reports/ej-eipreportout-of-control-final.pdf.

[viii] Mich. Comp. Laws § 324.31518.

[ix] Clean Water Action. *Toxic Trash Exposed: Coal Ash Pollution in Michigan, October 2013, available at* http://www.cleanwaterfund.org/mitoxictrashexposed