

THE TRUE COSTS OF COAL: DON'T FORGET COAL ASH

TAKE ACTION

EPA has the authority to put in common-sense regulations that protect human health and communities living with coal ash disposal sites. Call the White House and tell them to let the EPA restore science to this issue and release standards that protect the public health. White House Comment line at 202-456-1111.

CONTACT WORC

Billings Office

220 S. 27th Street, Suite B
Billings, MT 59101
(406)252-9672
billings@worc.org
www.worc.org

Washington, D.C. Office

110 Maryland Ave., NE, #306
Washington, DC 20002
(202)547-7040
dc@worc.org

Montrose, Colorado Office

60584 Horizon Drive
Montrose, CO 81401
(970)323-6849
montrose@worc.org

Lemmon, South Dakota Office

2307 5th Ave NE
Lemmon, SD 57638
(701) 376-7077
jerilynn@worc.org



WHAT IS COAL ASH?

Coal combustion waste, or coal ash, is a collective term used for all solid remnants left over after coal is burned. As a byproduct of burning coal, coal ash has higher toxic concentrations of heavy metals such as arsenic, lead, and mercury than coal itself.

Coal ash is extremely fine material, and in the past, most escaped out of exhaust towers into the air. However, due to severe health problems associated with airborne coal ash, national air quality standards now require fly ash to be collected and stored instead of being released into the air. An important stride made to limit air pollution has now unfortunately created a new and growing problem with coal-fired power plants around the country generating over 130 million tons of coal combustion waste each year that must be safely and properly stored.

WHERE DOES THE COAL ASH GO NOW?

Only 43 percent of coal ash is recycled into products like concrete and wall board, and the remaining 70 million tons must be stored or disposed of. Many plants dispose of the coal ash using a 'dry' method, whereby the ash is stored in silos and trucked to landfills. Some plants, however, decide to use the cheaper 'wet' method which involves mixing water with the ash and dumping it into a collection pond or impoundment area.

In the past, demands for regulation have mostly been centered on the disposal of coal ash in surface impoundments, since wet disposal of toxic ash

COAL ASH CONTAMINATES DRINKING WATER

A 2007 Environmental Protection Agency report includes a total of 67 proven or potential cases of water contamination documented in 23 states from landfills and surface impoundments containing coal combustion waste.

One of the cases of water contamination cited in the report is from a coal plant in Colstrip, Montana. For over two decades the toxins from two coal ash impoundments leached into the ground, leading to extensive contamination of the entire aquifer. In 2008, the consortium that controls the plant paid \$25 million to settle a lawsuit filed by 57 residents. Their well water was so contaminated they had to abandon their wells and get connected to the city water line. The company also dug recovery wells around the plant in an effort to pump the contaminated water out of the aquifer back into the pond. Unfortunately this did not solve the problem because the ponds continue to leak toxic chemicals.

ALL SORTS OF REALLY NASTY STUFF.....

Aluminum	Chromium	Nickel	Vanadium	Antimony	Cobalt	Zinc
Arsenic	Iron	Potassium	Barium	Lead	Selenium	Beryllium
Magnesium	Silicon	Boron	Manganese	Sodium	Cadmium	Mercury
Sulfur	Calcium	Molybdenum	Thallium	Nitrate/nitrite(MCL)		

Coal ash contains all of the heavy metals and chemicals listed above. Many of these pose serious threats to human health when leached into groundwater. Some of those affects include decreased production of red and white blood cells, anemia, lung and heart problems, mental retardation, cancer and even death.

ONE OPTION - REUSE!

Recycling coal combustion waste is one safe way to safely store coal combustion waste. And at WORC we know from experience, the floor in our Billings office is 15% fly ash concrete. Reusing coal combustion waste in applications such as concrete can bind the harmful chemicals and heavy metals, preventing leaching into groundwater sources.

contamination due to these toxic chemicals. This is not to say that disposal in landfills do not pose any risks; a 2007 EPA report of proven damage cases from coal ash disposal documents that landfills in New York, Michigan, Wisconsin and Indiana have led to contaminated groundwater.

HOW IS COAL ASH REGULATED?

Currently coal ash is regulated exclusively on a state-by-state basis, leading to a patchwork of little to no regulations. In fact, 20 % of states exempt coal ash entirely from any waste regulations. EPA's role in regulating coal ash has been debated for nearly 30 years, and although some have acknowledged that coal ash is dangerous and should be strictly regulated, EPA has continually exempted it from hazardous waste controls.

In the WORC region, Colorado, Idaho, Montana, South Dakota and Wyoming designate coal ash as either a solid waste or industrial waste. Colorado considers the application of the solid waste disposal rules on a case-by-case basis. North Dakota and Oregon have no specified designation for coal ash, and although North Dakota has seven coal power plants and ranks 14th in the amount of stored coal waste, there are no standard state disposal regulations.

CURRENT STATUS OF FEDERAL REGULATION

In December of 2008, an earthen embankment failed at the Tennessee Valley Authority's (TVA) Kingston Fossil Plant in Harriman, Tennessee. One billion gallons of coal ash sludge covered over 300 acres of countryside and

in lagoons are typically unlined. According to an Environmental Integrity Project report released January 2009, 74 percent of wet impoundments in the U.S. are not lined, virtually guaranteeing some type of groundwater

waterways. This spill, larger than the Exxon-Valdez oil spill, brought the dangers of coal ash to the forefront of the public's attention.

The EPA announced its intent to issue a rule by the end of 2009, but as of February 2010, that EPA rule is held up at the White House's Office of Management and Budget (OMB). Instead of publicly issuing the rule in a timely manner and allowing for public comment, they have instead held more meetings with coal industry lobbyists than any other issue the OMB has tackled.

MORE INFORMATION

Natural Resources Defense Council
www.nrdc.org/energy/coalwaste/

Sierra Club
www.sierraclub.org/coal/resources/

SOURCES

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Tennessee. Department of Health. Coal Fly Ash Release Fact Sheet. 13 Feb 2009. Web.

Schaeffer, Eric and Lisa Evans. "Coming Clean: What the EPA Knows About the Dangers of Coal Ash." May 2009. The Environmental Integrity Project and Earthjustice. Web.