

Coal Ash

This article continues the presentation of background information on Sustainability. Coal ash is a byproduct from coal combustion and is created when coal is burned to generate energy. It is what is left after burning of coal to generate electricity. It includes boiler slag, scrubber sludge, fly ash and bottom ash. Worldwide coal fired power plants are the major producers of coal ash. Some components of coal ash are re-used in such products as concrete, but there is still considerable material that must still be isolated and stored to prevent pollution. Coal ash contains heavy metals and toxins such as arsenic, barium, cadmium, chromium, lead, mercury, selenium and thallium (and others) that are harmful to human health and the environment. These toxins can contaminate ground and surface waters. Airborne fly ash is a dangerous pollutant causing many health problems. Another fly ash component of some concern is lime. Lime chemical reacts with water to form calcium hydroxide giving fly ash a pH somewhere between 10 and 12, a medium to strong base. Living beings (humans, animals, plants, fungus etc) cannot tolerate extremes in pH so that this alkaline pH can be just as damaging as acid rain to all living creatures. Failure to contain coal ash properly can lead to catastrophic problems. This was demonstrated with a coal ash spill in Tennessee in 2008 generated over one billion dollars in damages.

AmerenUE is proposing to site a 400 acre 100 foot tall coal ash waste project on 1100 acres of the Missouri River bottomland. This land is on the floodplain of the Missouri River and would store coal combustion waste from the Labadie power plant as well as other plants. The Missouri River provides drinking water to St Charles and St. Louis Counties. The Labadie Environmental Organization, <http://www.leomo.info/>, has been formed in response to this proposal. EPA, which previously did not regulate coal ash, is in the process of establishing the Coal Ash Rule which would regulate coal ash as a hazardous material. A Coal Ash Rule Comment Period was recently concluded.

The Habitat for Humanity Third Phase Project located in North Saint Louis this year was stopped when it was determined that the property to be used was contaminated with coal ash. This property must be mitigated with the remove of the surface soil prior to the building of homes.

By taking small steps to conserve energy (turning out lights when you leave the room), we can reduce the need for additional coal powered plants and reduce the generation of coal ash.