

Jan 17<sup>th</sup> hearing

EXHIBIT 3  
DATE 1-17-05  
HB 48

Sue,

Below I have included some information I found on the web on the hazards of solid waste from coal fired power plants, I have included the website where I found this information below each quoted piece.

Also I pulled some Thompson River Cogen specific information from their permit application:

TRC estimates they will produce between 2.8 –9.6 lbs of ash per MMBtu.

They are allowed a maximum of 1,688,928 MMBtu per year.

This means they will produce between 4,728,998 – 16,213,708 lbs of ash each year.

(Converted to tons this is 2,364 – 8,106 tons of ash each year.)

TRC will be initially storing the ash in ash silos on site. They have claimed to be looking for beneficial uses of the ash (transferring to a cement plant for example) but it's unclear what they are planning to do with their ash when the silos fill up.

Solid waste from Coal fired power plants

### **Solid Waste Generation**

“The burning of coal creates solid waste, called ash, which is composed primarily of metal oxides and alkali.<sup>2</sup> On average, the ash content of coal is 10 percent.<sup>3</sup> Solid waste is also created at coal mines when coal is cleaned and at power plants when air pollutants are removed from the stack gas. Much of this waste is deposited in landfills and abandoned mines, although some amounts are now being recycled into useful products, such as cement and building materials.”

From <http://www.epa.gov/cleanenergy/coal.htm#fn2>

#### **‘General Information on Power Plant Waste**

Each year, the burning of coal produces over 115 million tons of solid waste. The waste is a mixture of coal ash and sludge from air emission scrubbers, caustic cleaning wastes, and a variety of other wastes produced from the burning of coal. Coal power plant wastes contain concentrated levels of arsenic, cadmium, chromium, lead, selenium, sulfates, boron, and other contaminants.

Power plant wastes have been well documented to cause deformities, infertility, genetic damage, and death in plants and wildlife. To date, HEC has found 63 cases where power

plant wastes have contaminated ground and surface water beyond federal and state drinking water and health standards.

## DEDICATED TO THE MEMORY OF MAX GOODWIN

This website is dedicated to the memory of Max Goodwin who fought for many years to gain meaningful standards for power plant waste disposal and protect the rights of coal field citizens.

Despite the threat to human health and the environment posed by power plant wastes, most power plant waste disposal sites remain unlined and many do not have ground water monitoring. Throughout the country, these wastes are dumped in unlined coal strip mines and sand and gravel pits where they can come into direct contact with ground water.

These weak disposal standards amount to a pollution subsidy of hundreds of millions of dollars for the coal-fired power industry, the largest producer of greenhouse gases. Without stronger disposal standards, the cheap costs of power plant waste disposal will keep other, cleaner forms of energy from competing with coal-fired power.

In the spring of 2000, EPA reached its final decision on whether federal regulations should be established to set the minimum safeguards required at all power plant waste disposal sites. EPA had decided that federal regulations were needed due to the evidence of contamination from power plant wastes, the gross inconsistencies in disposal standards between states and different disposal methods (i.e. dumping in landfills vs. strip mines), and strong public support for such standards generated by HEC and other grassroots organizations around the country.

However, EPA was never able to gain support for this action from the White House, and caved into pressure from the electric utility industry and their political allies. Instead of federal regulations, EPA has opted for creating advisory guidelines on power plant waste disposal which have no regulatory authority. This decision not only exempts power plant wastes from federal regulation, but also any material coburned with the coal including old tires, plastics, and petroleum coke.

The Hoosier Environmental Council is committed to gaining meaningful environmental safeguards for power plant waste disposal not just here in Indiana, but throughout the country. These safeguards include requirements for liners, ground water monitoring, and clean up of any contamination that occurs. In order to accomplish this goal, we are making this webpage the most comprehensive database on coal power plant wastes available to citizens, environmental groups, and state officials. If you know of any cases of power plant waste contamination or information on state disposal programs for these wastes, please contact Brian Wright at [bwright@hecweb.org](mailto:bwright@hecweb.org) or 317-685-8800. We are always on the lookout for new information on power plant wastes.'

From:

[http://www.hecweb.org/Programs%20and%20Initatives/CCW/general\\_ppw\\_info.htm](http://www.hecweb.org/Programs%20and%20Initatives/CCW/general_ppw_info.htm)  
Hoosier Environmental Council

Kentucky Resources Council - **KRC comments on Thoroughbred Coal Ash Landfill** Posted: September 23, 2003

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September 23, 2003

Ronald D. Gruzesky, Manager By fax and e-mail only

Solid Waste Branch

Division of Waste Management

14 Reilly Road

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Re: Thoroughbred Generating Company, LLC

Application No. 089-00034 LSI NWI AI#35762

Dear Ron:

These comments are submitted regarding the draft permit for the special waste landfill intended for disposal of coal fly and bottom ash from the proposed Thoroughbred Generating Company, LLC. coal-fired electrical generating station.

Background

Disposal of coal combustion wastes presents potential environmental and public health concerns that justify imposition of rigorous design and monitoring standards. The 1988 U.S. Environmental Protection Agency Report to Congress concerning coal combustion wastes (including fly ash, bottom ash, boiler slag and flue gas emission control wastes) acknowledged the range of toxicity and potential for causing groundwater contamination among and within the categories of coal combustion waste. According to the EPA Report Wastes from the Combustion of Coal by Electric Utility Power Plants, EPA/530-SW-88-002:

The primary concern regarding the disposal of wastes from

coal-fired power plants is the potential for waste leachate to cause ground-water contamination. Although most of the materials found in these wastes do not cause much concern (for example, over 95 percent of ash is composed of oxides of silicon, aluminum, iron and calcium), small quantities of other constituents that could potentially damage human health and the environment may also be present. These constituents include arsenic, barium, cadmium, chromium, lead, mercury and selenium. At certain concentrations these elements have toxic effects. *Id.*, at ES-4.

While the findings of the EPA Report and review of industry-generated studies indicated generally that metals did not leach out of coal combustion waste (CCW) at hazardous (100 x drinking water standards) levels, hazardous levels of cadmium and arsenic were found in ash and sludge samples, and boiler cleaning wastes sometimes contained hazardous levels of chromium and lead. *Id.*

While acknowledging that coal combustion wastes (fly ash and scrubber sludge) do not usually exhibit sufficiently high toxic properties to be classified as hazardous based on TCLP toxicity, a recent study of CCW in Indiana indicated that CCW does contain high enough concentrations of leachable toxic elements to create significant environmental concern. Boulding, J. Russell, *Disposal of Coal Combustion Waste in Indiana: An Analysis of Technical and Regulatory Issues* (1991).

Among the significant findings of this report, which was based on extensive literature review and analysis of coals burned in Indiana utilities (including Kentucky coals), and which should instruct the imposition of final conditions on this permit, were:

1. Neither EP nor TCLP tests provide a good indication of leachability of CCW in natural disposal settings. Long-term leaching tests conducted until equilibrium has been achieved for each element of concern, using a leaching solution that approximated percolating groundwater, would give a more accurate depiction of