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July 13, 2009

John Therriault
Illinois Pollution Control Board
100 West Randolph, Suite 11-500
Chicago, Illinois 60601

Re: Ameren Energy Generating Company
PCB 2009-038 thermal Demonstration

Dear Sir:

I am a resident of Hillsboro, Illinois and have concerns about the proposal to raise the temperature in Coffeen Lake. I visit the Coffeen Lake frequently and have friends who boat and fish on the lake. I am a member of Citizens Against Longwall Mining (CALM) and Illinois Sierra Club. We will all be adversely affected if the temperature is allowed to be raised at any time during the year.

There is an additional problem that was never mentioned during the hearings.
The Deer Run Mine is scheduled to longwall mine with the planned subsidence in the area under McDavid Branch.

I attended the Litchfield hearings on June 23, 2009 and nothing was mentioned about the Deer Run Mine subsidence affecting McDavid Branch. McDavid Branch is located in the shadow area of the mine in sections 5, 22 and 27 of East Fork Township. Mining is scheduled to begin in 2010 and continue through 2015 with seven longwall panels. Five of those panels will go under Route 185 and will most assuredly affect the watershed feeding into Coffeen Lake.

If McDavid Branch is subsided during the longwall mining process the water may be greatly diminished or disappear all together. According to the Illinois Permanent Program, IDNR should require subsided areas to be reclaimed. However, if the damage from subsidence is technologically and economically unfeasible then the area is not required to be reclaimed. 62 IAC 1817.121 (a) (1). Additionally, the Office of Surface Mining, Andrew Gilmore, Regional Manager, informed CALM members that subsidence is not considered a mining activity and reclamation is not required. (United States Court of Appeals 6/3/2003 No. 02-5136 Citizens Coal Council , et al. vs.. Gale Norton Sec. of Interior, National Mining Assoc.) Also citizens complaints must exhaust the Illinois Permanent Program/SMCRA rules before OSM would consider complaints against IDNR.

I have included photos of Coffeen Lake I took March, 2009 showing steam rising from the lake and obscuring the road over the dam. Also included are photos taken during the drought of December 2007. This is the lowest lake level ever seen. If the watershed is damaged by subsidence and McDavid Branch is unable to flow into Coffeen Lake then these photos will be much worse.

I'm also concerned about the runoff into the lake from the coal waste at the US Minerals site on Fox Avenue. Are there test wells in place to monitor the runoff? Was a liner placed under the coal combustion waste to prevent seepage into the lake? Where are the air monitoring stations? The residential area is a short distance to the left of the photo #6265. What is being done to protect these people during high winds?

There are many unanswered questions with this Ameren site. The lax enforcement of the rules by IDNR and IEPA to protect the health and welfare of the public is evidenced by the number of litigation cases now in the progress. It is my hope the construction of the new ash pit just south of Fox Avenue will follow the rules and protect the public with a liner and air monitoring systems in place before the new scrubbers come on line. Hopefully the new dewatering technology now available will be used for the ash slurry (see attached).

I hope the Pollution Control Board will take responsibility to protect the Coffeen Lake and it will not become another superfund site as the Eagle Zinc Smelter (Hillsboro) and ASARCO, Inc (Zinc Smelter in Taylor Springs).

Sincerely,

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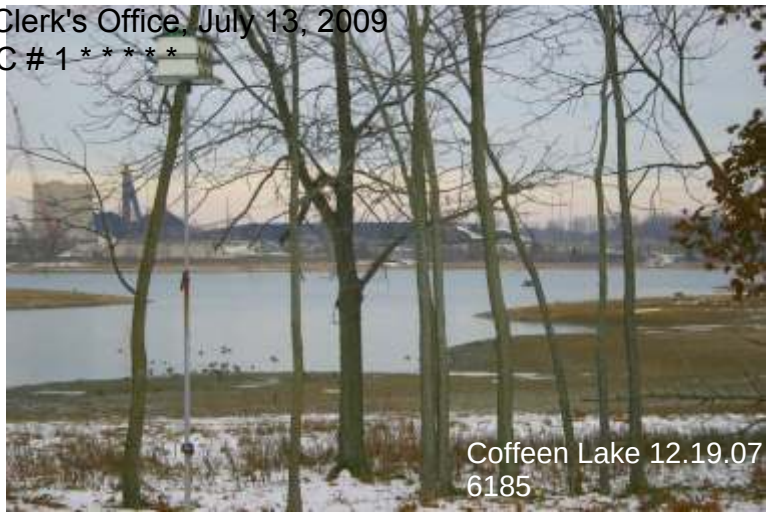
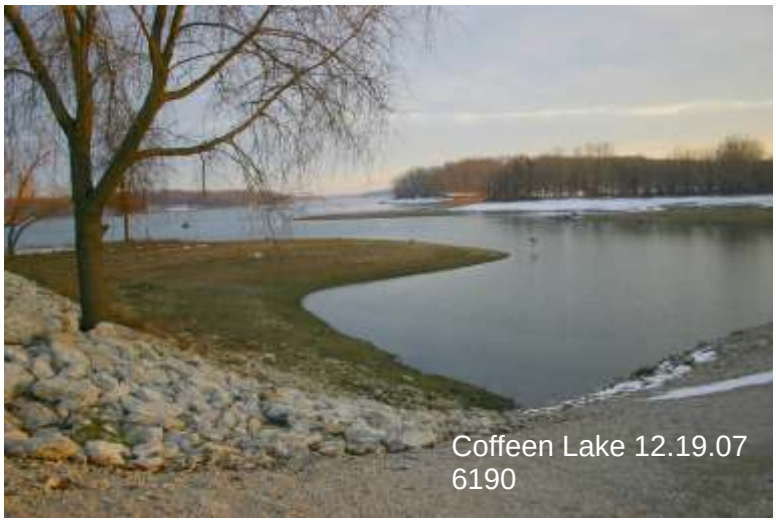
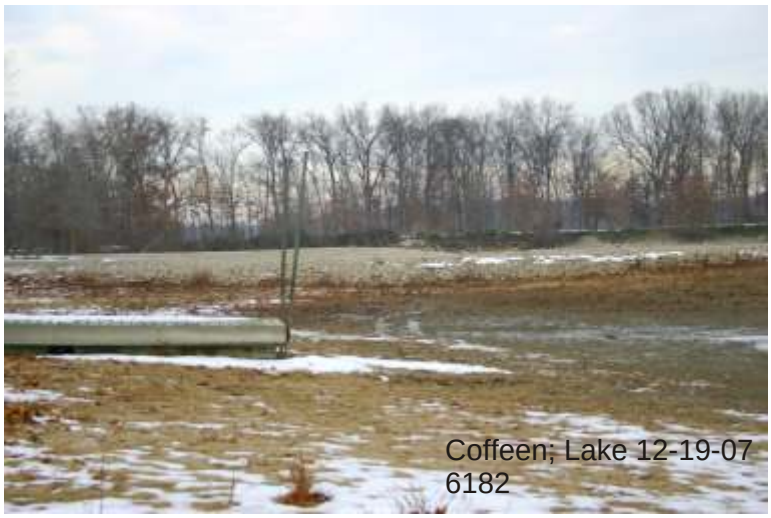
Coffeen Lake 3.23.08
6346


Coffeen Lake 12.19.07
6185


Coffeen Lake 3.23.08
6341


Coffeen Lake 12.19.07
6190


Coffeen; Lake 12-19-07
6182


US Minerals, Fox Ave, 3.1.08
6271


US Minerals, Fox Ave, 3.1.08
6265


US Minerals, Fox Ave, 3.1.08
6268

Proof positive that the slurry at Monterey's RDAs are contained in (unlawful) permanent coal waste impoundments:

Device To Remove Moisture From Coal Slurry Successfully Tested.
The AP (2/10) reports, "The U.S. Department of Energy (DOE) says experimental equipment designed to remove water from coal slurry has been tested successfully at a West Virginia preparation plant." The DOE "says a prototype hyberbaric centrifuge removed enough water from slurry...that the leftover material could be sold." The agency "calls the result significant for coal producers and environmentalists because it could lower the amount of coal slurry discarded by the industry."

Power Engineering Magazine (2/9) added that the invention "potentially makes almost 3 billion tons of waste coal available for use. ... The high moisture content of fine coal waste forces coal producers to discard the waste in storage areas called waste impoundments."*

* called "waste impoundments under construction" (sic) by OSM
but better known as unlawful permanent coal waste impoundments. RLJ

UK's Mineweb (2/9, Chadwick) noted, "Removing moisture from very fine coal particles left over from the coal preparation process has been difficult in the past**. Conventional methods such as thermal dryers or mechanical dewatering have either been too costly or have been unable to dewater ultrafine coal particles (0.1 mm or less)**. The hyperbaric centrifuge has successfully addressed those issues."

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DOE says coal slurry drying invention works

http://www.forbes.com/feeds/ap/2009/02/09/ap6027440.html?partner=email

Associated Press, 02.09.09, 12:32 PM EST

The U.S. Department of Energy says experimental equipment designed to remove water from coal slurry has been tested successfully at a West Virginia preparation plant.
The agency says a prototype hyberbaric centrifuge removed enough water from slurry at **Arch Coal Inc.** (nyse: ACI - news - people)'s Cardinal Preparation Plant in Sharples that the leftover material could be sold. DOE calls the result significant for coal producers and environmentalists because it could lower the amount of coal slurry discarded by the industry.
Mine operators typically store slurry behind dams.
The agency says the centrifuge was developed by researchers at Virginia Tech.

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POWER ENGINEERING:
http://pepei.pennnet.com/display_article/352743/6/ARTCL/none/none/1/New-technology-could-aid-waste-coal-recovery/

New technology could aid waste coal recovery

9 February 2009 – University researchers have developed and successfully tested a process that removes water from fine coal slurries, potentially making almost 3 billion tons of waste coal available for use.
During recent prototype tests at Arch Coal Co.'s Cardinal plant in Logan County, W.Va., the technology reduced moisture enabling the waste coal to be marketed commercially.

With funding from the National Energy Technology Laboratory, researchers at Virginia Tech say their hyperbaric centrifuge can efficiently dewater coal as fine as talcum powder. The centrifuge uses a combination of air pressure and centrifugal force to reduce moisture levels in fine coal, according to a Department of Energy press release. Tests show the centrifuge can dewater waste coal slurry to as much as 19 percent moisture with coal recovery greater than 97 percent.

The prototype unit used at the Cardinal plant can process around 30 gallons of feed slurry each minute. Decanter Machine Co. built the prototype and is building a full-scale commercial unit with a capacity of 600 gallons per minute.

The high moisture content of fine coal waste forces coal producers to discard the waste in storage areas called waste impoundments, according to the release.

Nationwide, some 2 billion tons of fine coal are stored in abandoned ponds. An additional 500 million to 800 million tons are in active ponds

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http://www.mineweb.com/mineweb/view/mineweb/en/page72558?oid=78184&sn=Detail

NETL AWARD

Increased coal recovery from dewatering fine coal slurries

Researchers at Virginia Tech have demonstrated a technology to separate fine coal from water as an energy resource which can be marketed commercially.
Author: John Chadwick
Posted: Monday , 09 Feb 2009
LONDON -

A $13 million cooperative effort with America's Office of Fossil Energy's National Energy Technology Laboratory (NETL) over the past seven years has resulted in the successful demonstration of a novel technology that addresses a problem plaguing coal operators and environmentalists alike: separating fine coal particles from water and their ultimate use as a significant energy resource.
Researchers at the Virginia Polytechnic Institute and State University (Virginia Tech) in Blacksburg have developed and patented an advanced technology called a hyperbaric centrifuge that can successfully remove water from very fine coal slurries. During recent prototype tests at Arch Coal's Cardinal plant in Logan County, West Virginia, the technology reduced the moisture to a level that the waste coal can now be marketed commercially. The result is significant in that

coal producers each year discard large amounts of moisture-laden coal fines that can potentially be salvaged for energy use while simultaneously cleaning up the environment.

"We are heartened by the success of Virginia Tech's technology because it represents a major step forward in clean coal separation technology while addressing environmental concerns associated with waste coal impoundments," said Dr. Victor K. Der, Principal Deputy Assistant Secretary for Fossil Energy. "The continued success and application of this technology holds promise for converting millions of tonnes of 'lost' energy into a valuable resource for the US energy consumer."

Virginia Tech received the award from NETL as part of the Office of Fossil Energy's Hydrogen and Fuels program. Virginia Tech used the grant to develop the prototype centrifuge, evaluate its operation and design, and demonstrate it at coal-cleaning plants in Virginia, Alabama, and West Virginia. Several other technologies were also developed as part of the $13 million cooperative research effort.

Virginia Tech's Center for Advanced Separation Technologies (CAST) tested the centrifuge at three operating plants, including the most recent test at the Arch Coal plant, where waste coal slurry went through the centrifuge at a rate of 30 gallons per minute and was dewatered to 13-19% moisture with coal recovery greater than 97%. Virginia Tech, in conjunction with West Virginia University, formed CAST in 2001 under the sponsorship of NETL to develop advanced separation technologies.

The prototype unit tested at the Cardinal plant was constructed by Decanter Machine as part of a license agreement with Virginia Tech. Based on the successful test result, the company is currently building a full-size commercial unit with a capacity of 600 gallons/minute. Virginia Tech holds a US patent on the technology, as well as international patents in seven countries.

Dr. Roe-Hoan Yoon, the lead developer of the technology at Virginia Tech, explains that the centrifuge applies a combination of air pressure and centrifugal force to successfully reduce significant levels of moisture in fine coal. He said that the idea came from basic research.

The success of the hyperbaric centrifuge is significant in the overall scheme of clean coal research in that the high moisture content of fine coal waste forces coal producers to discard the waste in storage areas called waste impoundments. Estimates indicate that these impoundments nationwide hold about 2,000 Mt of fine coal in abandoned ponds and an additional 500 to 800 Mt in active ponds. Technology that can recover these wastes would produce valuable resources to energy supplies.

Removing moisture from very fine coal particles left over from the coal preparation process has been difficult in the past. Conventional methods such as thermal dryers or mechanical dewatering have either been too costly or have been unable to dewater ultrafine coal particles (0.1 mm or less). The hyperbaric centrifuge has successfully addressed those issues.

Virginia Tech researchers explain that the centrifuge, when combined with another Virginia Tech-developed clean coal technology called Microcel, can remove both ash and water from the fine coal discarded at impoundments. These technologies will not only help coal producers minimise waste generation, but will also create small businesses recovering coal from existing waste impoundments.

John Chadwick is editor/proprietor of International Mining magazine - *www.im-mining.com*