

RAD WASTE UPDATE

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Meeting Schedule

HPS Annual
Minneapolis, MN
July 12-15
Booth 510

Tie Dye Shirts

The Tie Dye Shirts we purchased from the South Texas Chapter at the Mid-Year Meeting in San Antonio are a big hit, especially in public!



Kingston Ash Spill

On December 22, 2008 the ash retention pond at the coal fired steam plant operated by the Tennessee Valley Authority (TVA) located near Kingston, TN, failed, spewing approximately 5.4 million cubic yards of coal ash and water on to land adjacent to the plant and into the nearby Clinch and Emory Rivers. The initial spill affected about 300 acres and destroyed three homes, with several more slightly damaged.



PHOTO BY J. MILES CARY/NEWSSENTINEL

No injuries occurred, but portions of a rail line and local road were covered with ash, and utilities were interrupted including water, power and gas. State, federal and local agencies responded immediately. Since the incident TVA has established a local office and Members include U.S. EPA Region 4, the Tennessee Department of Environment and Conservation (TDEC), the Roane County Office of EMHS, and TVA.

To date almost \$70.0 million has been spent in containing and cleaning up the spill. Final costs are estimated to be between \$300 million and \$ 1.0 billion with completion taking from three to five years. The costs will most likely be passed on to the TVA utility customers.

TVA has spent more than \$20 million purchasing 70 properties consisting of more than 40 homes and 210 acres affected by the coal ash spill. The Roane County Property Assessor said these properties appraised at more than \$9.5 million and because TVA is tax exempt, the county will lose more than \$60,000.00 per year in property taxes generated by these homes and lands.

Analysis of the Fly ash indicates that the ash itself does contain elevated levels of Arsenic, Lead and Manganese. Levels of these compounds above the Clean Water Act (CWA) were found in the Emory River in January after a period of heavy rain. No levels above the CWA were found in the main river channel or near water intake systems for the surrounding communities.

(Continued on page 3)

TENNESSEE BILL TO BAN LANDFILL OF RAD WASTE

Senate Bill 687 was introduced into the Tennessee legislature by a group of citizens concerned with the ongoing practice of placing low level radioactive waste into Tennessee landfills. This is the second year in a row that a bill which calls upon the state to discontinue the practice has been introduced. Opposition by some of the waste processing companies in Tennessee and the Tennessee Department of Environmental Control (TDEC) has put the bill in limbo, however the Bill is being amended and could be reintroduced during the current session.

The practice of dumping radioactive waste into landfills has been under controversy for the past several years. Some Tennessee companies may accept very low level radioactive material and under license amendments may place the waste into one of five landfills located in the State. Alarmed at leaks in a local landfill, citizens in 2007 called upon the State to standardize the practice and make transparent the program under which landfill disposal is conducted. At least one landfill has halted accepting these wastes due to the public outcry.

Since no action was taken in standardizing the rules, citizens have called upon the legislature to halt the practice altogether. The word "Processing" in the present bill has caused alarm at some waste processing companies and they have lobbied against the bill fearing that this measure would stop all waste processing in Tennessee. TDEC has responded with Fiscal Notes that claim the state would lose \$2.0 million a year in revenue and would need to place radioactive monitoring systems at 81 landfills in the State at a cost of \$9.0 million.

Proponents of the bill note that the TDEC Fiscal Notes response was originally authored for the bill the previous year and no review was conducted on the current bill which does not call for halting accepting waste at licensed processing facilities. They have pointed out that the companies lobbying the hardest against any restrictions in the landfill program are those which are promoting questionable practices.

Currently the State is unable to stop the practice of blending and diluting wastes to the point where they qualify for release into an unlicensed landfill. This has allowed some companies to take wastes destined for burial at a licensed disposal site and place the waste into a Tennessee landfill. Most generators are told their waste is disposed of within the provisions of the Low Level Radioactive Waste Policy Amendments Act and don't even realize their waste is entering Tennessee landfills. Radioactive waste that is not sent to a licensed land disposal facility is not regulated under the Act and is not subject to the same tracking and reporting requirements of waste sent to a licensed disposal facility.

If the bill is defeated a task force will be requested to study the situation.

LABORATORY DECOMMISSIONING

Bionomics has completed the first phase of a facility decommissioning which involved the removing of over 10,000 cubic feet of contaminated laboratory equipment from a 20+ year old research laboratory. This portion of the project has been completed under budget and in less time than the client expected. The second phase of the project will start after approval by the facility's regulatory body of the decommissioning plan, and will involve cleaning or removal of marginally contaminated portions of the building.



This company sold the assets of the facility and retained the building for possible sale or use in another industry. They want the building to be free of any possible contamination that could result in future liability and have chosen to remove any materials that are contaminated or suspected to be contaminated. This is a much more restrictive closure than one conducted under MARSSIM.

Everything including ceiling tiles, fume hoods, cabinets, sinks, duct work, roof vents and blowers, were removed. When survey's indicated possible contamination in other areas, materials in these areas were removed and used to fill in void spaces in the disposal containers. The tile floor was left in place to guard against contaminating the concrete floor during the second phase.

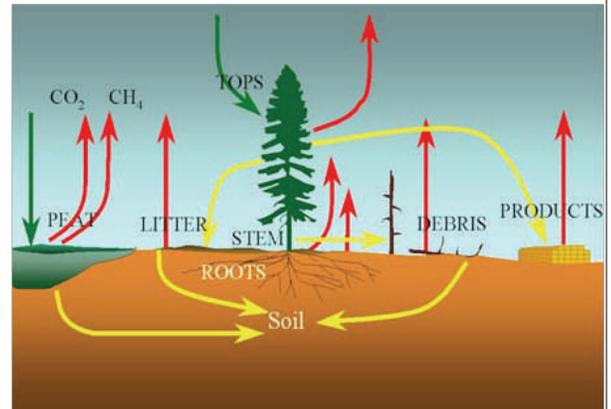
CARBON OFFSET PROGRAM

America could be on the verge of adopting the same “Cap and Trade System” that is currently used in Europe and Japan to reduce industrial pollution. This is a market based program that requires public and private companies that negatively impact the environment to purchase Carbon Credits from operations that positively impact the environment.

Since emission reduction systems are expensive and equipment updates to energy systems are too costly, Corporations are allowed to “trade” or pay others for stored carbon. (One Carbon Credit represents one ton of sequestered carbon). These Carbon Credits are used to “offset” or negate any Carbon Dioxide that is released in excess of the allowed amount.

A young healthy stand of loblolly pine on good soil, being managed for maximum growth will capture and retain about two tons of carbon per acre per year. A ton of carbon is equal to 3.87 tons of CO₂, so that stand will store 2 x 3.87 or 7.74 tons of CO₂ per acre per year. At the current market price of \$3.00 per ton, a landowner could sell his carbon credits for \$23.22 per acre per year for the term of the contract. A similar stand of mature Mixed Hardwoods captures and retains between 1 and 3 tons of CO₂ per year depending upon age.

Bionomics is involved in a certified Forestry conservation program consisting of both Loblolly Pine and Mixed Hardwoods. This program captures an estimated 1,850 tons of CO₂ per year. That is more than enough Carbon Offsets to fully cover the operation of our trucks, offices and each employees homes, and the emissions associated with the processing and disposal of all the waste handled by our company for several years. We will utilize these offsets ourselves and any credits leftover will be banked for future use.



ASH SPILL, CONTD.

Radiation found in the ash is consistent with Fly Ash found at other coal fired plants with levels ranging from 5 to 8 pCi/gm of Radium daughters. The TVA and TDEC do not see this as a hazard and are focusing on the heavy metals in the ash and how best to contain those compounds in a secure landfill.

Several lawsuits have been filed in this matter most notably that by Weitz and Luxenberg, the law firm working with environmental activist Erin Brockovich, on behalf of 109 property owners. At least six other suits have been filed including one from an individual for over \$100 million. TVA is seeking to have the lawsuits dismissed on the grounds of “discretionary function” immunity. TVA also intends to file a motion to block the case from being decided by a jury and to preclude the possibility of punitive damages for its conduct.

Dredging of the Emory River near the ash site began on March 19 with plans to remove around 1.7 million, of the estimated 3 million, cubic yards of ash currently in the river during the first phase. The plan is to remove just the ash and not disturb the bottom of the river bed for fear of releasing PCBs, heavy metals and other hazardous constituents that have built up in the bottom over the years.

A plan for the removal and disposal or storage of the ash left in the retention ponds and recovered from the spill, has not been finalized as several issues need to be addressed. The burial of the ash requires a liner and several ideas have been presented including using the local landfill and creating a new landfill in an adjoining county. Residents are naturally skeptical of these ideas and besides not wanting the ash in their communities they are fearful of the amount of truck traffic.

It is estimated that if shipped by truck, there would be over 150,000 loads of material leaving the site and traveling over the one local road leading to the nearby interstate. That would amount to approximately one truck every nine minutes leaving or entering the site for the next three years. For liability reasons, trucks currently are barred from county roads in the hour before and after school and during the noon hour.

Area citizens remain concerned about the long term health risks and the perceived indifference on the part of TVA to address concerns. No employee of TVA has lost their job as a result of this spill.

Same Old Gimmicks, New Twist

We watched “new” waste processes come and go over the years and this year is not without exception. Presented in a different format “pyrolysis” and Geomelt are like the failed thermal treatment systems “steam reform” and “molten metal” that put two companies out of business and stranded wastes from many generators. Another Tennessee company using similar treatments has experienced equipment and process problems leading to a huge financial loss. The twist this time around is that the waste will become the processing facilities waste and they will bury it in a Tennessee landfill. This is their present modus operandi, they have not used the Utah site in three years, and future business plan. We have avoided these low cost options in the past and our clients have survived unscathed and without worry. Once again we will pass, as we fear this option like the others will prove to be short-lived.



Many of you ask about
Megan and Thor.
It seems like only yesterday
they were just ...

Little kids running around
the HPS meeting picking up
free goodies from the other
vendors.



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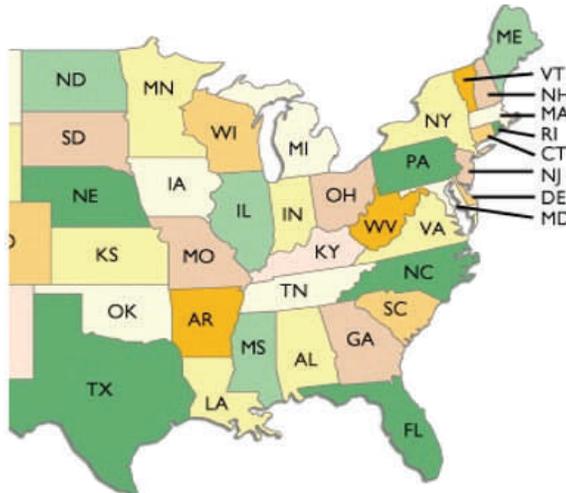
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Volume Reduction
Supplies
Support Services
Decontamination

Bionomics provides services all across the central and eastern United States, from Maine to Florida, across to Texas and up to the Dakotas and all points in between.