

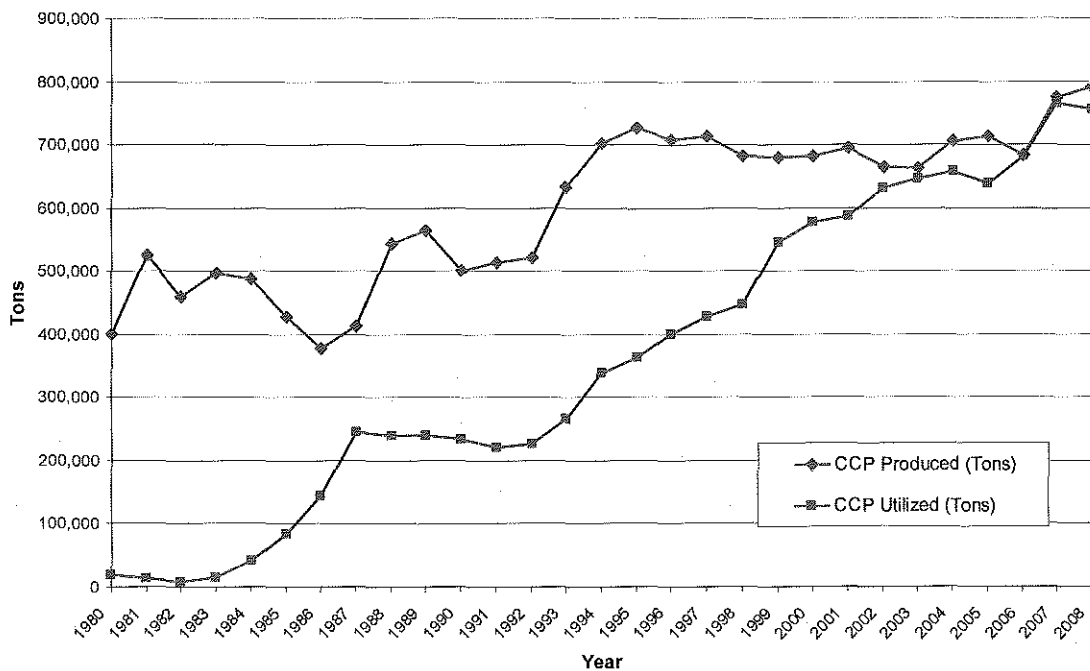
**Wisconsin Electric Power Company d/b/a We Energies
Coal Combustion Products Issues Summary Presentation to OMB
November 4, 2009 in Washington, D.C.
by Bruce W. Ramme, Ph.D., P.E.**

Purpose: The purpose of this summary is to provide information on the economic and environmental impacts of a RCRA C hazardous determination or “hybrid-C” determination on the beneficial use, and disposal of coal combustion products at We Energies.

Brief Background: Managing Coal Combustion Products (CCPs) in utility operations involves many coordinated efforts by company personnel and contractors who work to identify and support beneficial uses for these materials and avoid wasteful/expensive landfill disposal. We Energies has worked diligently to develop beneficial uses and markets for its coal combustion products (fly ash, bottom ash, and flue gas desulfurization gypsum). This work combined with environmentally protective regulations in Wisconsin (NR 538) has resulted in success in developing uses for nearly all of our CCPs produced over the last several years (see graph below). The CCP utilization program at We Energies generates approximately \$3 million dollars in revenue annually, and avoids disposal costs of approximately \$28 million dollars each year.

This is all accomplished with environmental benefits of conserving landfill space, reducing carbon dioxide and other emissions associated with Portland cement and lime production (when fly ash is used as an alternative), reducing the need for additional new cement and lime kilns, conserving quarried gypsum, sand and stone resources (when bottom ash or FGD gypsum are used as alternatives), providing a local and more economic source of high quality gypsum for farmers, providing “green” construction materials, and conserving land that would otherwise be needed for development of landfills and quarries. Please also see our Coal Combustion Products Utilization Handbook: http://wwwstg.we-energies.com/environmental/recycle_coalash.htm

We Energies Coal Combustion Products Production & Utilization



Example Issues - RCRA Subtitle C (hazardous) vs. Subtitle D (non-hazardous) Regulation:

Utilization (based on CCP quantities to be produced in 2011):

- We Energies CCP (fly ash, bottom ash, recovered ash and gypsum) utilization activities are engineered to maximize environmental benefit, economic benefits for customers, and maintain compliance with regulations and codes.
- Up to 1.5 million tons of valuable CCP mineral resources could be lost to construction and manufacturing markets from We Energies alone, and result in consuming land and landfill capacity.
- The opportunity to use 600,000 tons of fly ash to offset approximately an equivalent amount of CO₂ along with various other air emissions, and 5 million BTUs of energy per ton of Portland cement or lime produced, will be lost at We Energies.
- The opportunity for soil stabilization, cold in-place recycling (full depth reclamation) of asphalt pavements, and eco-pad pavements with self cementing fly ash with numerous safety, economic, and environmental benefits may be lost for highway departments and commercial projects.
- At We Energies alone, an additional 200,000 tons of sand and gravel will need to be mined annually (with associated land and other impacts) if bottom ash, and recovered ash are prohibited as an alternative material for base courses under asphalt and concrete surfaces or as raw feed material for cement manufacturing.
- Additional quantities of coal will need to be mined and purchased if We Energies cannot reburn existing and recovered ash as an alternative fuel source.
- An additional 600,000 tons of gypsum will need to be mined annually (with associated land and other impacts) if our high purity FGD gypsum cannot be supplied to wallboard producers, cement manufacturers, and farmers.
- Engineered underground mine safety applications, and subsidence prevention applications will be impaired that could result in loss-of-life and other tragedies for miners, mining companies and communities.
- We Energies has invested resources into various CCP utilization know-how, and patents that are yielding benefits. These innovations would be lost to We Energies and society.

Disposal (based on CCP quantities to be produced in 2011):

- We Energies landfills are used primarily for storage of CCP materials, and as a disposal contingency when needed. Our active landfills are permitted with liners, covers and monitoring wells.
- No hazardous waste landfills exist in the State of Wisconsin for anything.
- Hazardous waste handling, transporting, and manifesting for approximately 60,000 equivalent truckloads of CCPs annually (signatures for generator, agency, shipper, receiving facility, and confirming for each truck) is a costly burden for all involved. CCP quantities far exceed true hazardous wastes generated annually where this type of attention is deserved and thus devalued.
- Hazardous waste landfilling of CCP materials is unwarranted based on TCLP testing. All of our materials have been tested, and do not come close to failing a TCLP test.
- Permitting hazardous landfill facilities will take years, and be very unpopular and contentious. Categorization of CCPs by "declaration as hazardous waste" is both arbitrary and capricious.

- At We Energies, a transition from beneficial use to Subtitle D disposal in 2011 is estimated to cost about \$65 million each year. A transition from beneficial use to Subtitle C disposal (if a landfill can be permitted or located) is estimated to cost approximately \$300 million each year.
- Approximately 10 to 15 acres of land will be required annually for additional landfill capacity for disposal (as compared to conservation of land used for sand, gravel, stone and gypsum quarry activities when CCPs are used as alternative materials).

Conclusions:

The TVA Kingston impoundment disaster is tragic, and has resulted in a needed review of CCP disposal activities. However, the proposed regulation of CCPs as RCRA Subtitle C hazardous waste is unwarranted, and not science-based. Furthermore, environmental consequences will result in a shift away from utilization to activities such as: landfill building, construction and operation of more cement and lime kilns, increased surface and underground mining, and use of land for these activities. There will also be CCP business closings with associated loss of jobs. The "green" construction industry will lose several environmentally friendly alternative materials. These changes are all at great economic and environmental expense to society.

A hybrid-C approach at first sounds like a good middle-ground compromise, but after careful examination adds a tremendous product liability, commercial and legal burden on the marketability and utilization of CCPs in both manufacturing of products and construction. Utilization contracts frequently include language such as "We Energies warrants that CCP materials delivered hereunder will meet the Specifications for the Product, and will not contain constituents in quantities that, based on state or federal law and/or regulatory requirements are toxic or hazardous and would restrict its end use in the manufacture and sale of X" This contract term relates to product liability, transportation, and eventual disposal. Thus, a declaration of CCPs as hazardous based on no technical criteria (other than a declaration) is a commercial and legal issue/barrier for the CCP generator, manufacturer, constructor and owner.

Regulation of CCPs under RCRA Subtitle D provisions would ensure engineered, lined, covered and monitored landfill facilities that are protective of human health and the environment throughout the nation. Wisconsin utilization regulations (NR 538) are methodical in categorizing CCPs, identifying safe applications, and prohibiting activities with potential to impact the environment. The NR 538 regulations have been successful in promoting beneficial reuse and were developed with participation of industry, environmental groups, and private citizens. The EPA already has authority for intervention and enforcement when endangerment exists. A simple change to RCRA, could provide EPA with increased powers and authority for direct involvement in Subtitle D activities (when needed). This would provide the federal government through EPA with increased power and authority over CCP utilization and disposal, and also provide increased environmental protection across the nation.