

Editorial: The management of coal combustion residuals (CCR)

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The management of coal combustion residuals (CCR or “coal ash”) is a growth category for the geosynthetics industry. Multiple opportunities now exist using various types of geosynthetics due to the evolving federal and state regulations for handling CCR. In fact, geosynthetics have played a role in the regulations that have developed.

“These regulations have been influenced by prior performance of geosynthetic materials and the demonstrated benefits of geosynthetics in civil engineering,” Boyd Ramsey and Bill Betke write in Part 1 of their series, “The regulation of CCR in the United States,” beginning on page 21.

Several major CCR spills also influenced regulations. Geosynthetics can help prevent such accidents. They can also play a leading role in protecting groundwater and surface water from leaching CCR. Two articles in this issue look at innovative ways engineers use geosynthetics in the management of CCR, including “Macroencapsulation,” by John P. Swenson, Jeffrey T. Crate, and Scott Sheridan (page 32), which discusses in-place containment using encapsulated, mechanically stabilized earth (eMSE) berms employing geogrids combined with geosynthetic clay liners and geomembranes. “CCR management using geotextile tubes,” (page 43) by Christopher Timpson, presents an examination of dewatering CCR in geotextile tubes.

Plus, geosynthetics can save money. As Swenson and his coauthors assert, the eMSE macroencapsulation method offers “many cost-saving opportunities in material procurement, construction methods, and phasing.”

So, the use of geosynthetics in CCR management applications is cheaper, faster, more efficient, and environmentally friendly if employed properly. There is something for everyone in the industry to appreciate, whether they work in environmental organizations, in government, or in geosynthetics companies. Geosynthetics technology holds bipartisan appeal, because it creates jobs, keeps water safe, allows companies to please stockholders by saving money, and effectively manages Subtitle D solid waste. As our industry grows, federal and state legislators, engineers, and site owners can benefit from considering geosynthetics as a solution to dealing with CCR.