

Application of Asset Management Principles to CCP Storage Impoundments

**R. Neil Davies, C.Eng., MICE, P.E.¹, Robert C. Bachus. Ph.D., P.E.¹,
Vernon J. Dotson, Jr.²**

^{1,2} Geosyntec Consultants, 1255 Roberts Blvd., Suite 200, Kennesaw, GA 30144

³Tennessee Valley Authority, 1101 Market Street, Chattanooga, TN 37404

KEYWORDS: CCP, Asset, Management, Storage, Impoundment

ABSTRACT

The Tennessee Valley Authority (TVA) provides a significant portion of its power generation capacity using fossil fuels. As a result, large quantities of Coal Combustion Products (CCPs) must be managed as a normal part of operations. While TVA makes significant efforts to market the resulting CCPs for beneficial use, market demand is typically less than the rate of CCP production resulting in the need to effectively manage or dispose of CCPs in a safe and efficient manner. Where possible and practical, TVA manages excess CCPs in storage facilities located on or close to the generation facility. These facilities are engineered structures such as ash ponds, impoundments and stacks and many have been in operation for decades. In recent years, the quantity of CCPs managed has increased significantly as a result of the production of synthetic gypsum resulting from the operation of enhanced emission control systems. Like all engineered structures, CCP storage facilities must be effectively operated, managed and maintained. This paper describes how CCP storage facilities can be managed effectively through the application of asset management principles to develop effective operation, monitoring, and maintenance programs that minimize the “total cost of ownership” of these facilities.

**Submitted for consideration in the 2009 World of Coal Ash Conference,
May 4-7, 2009.**