Field Studies Supporting Geochemical Modeling of Leaching Performance in a Closed Coal Ash Pond

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Abstract (172 words of 250 max)

Porewater concentrations are not routinely monitored at coal ash disposal facilities, and in many cases the material does not contain sufficient water for porewater monitoring. In some cases, porewater or leach test concentrations have been suggested as a predictor of future groundwater quality issues; however, both environmental managers and regulators recognize that these measurements are not always linked and neither leach test or porewater concentrations are necessarily an indicator of future groundwater impacts.

In an effort to provide a methodology for understanding and predicting the long-term hydrological and chemical performance of coal ash disposal facilities, the leaching and hydraulic properties of field samples collected from a closed stilling pond were determined. Field samples were collected as a function of depth and evaluated to measure the spatial homogeneity of the pond. Test methods on composited samples included common regulatory tests and materials characterization tests from the Leaching Environmental Assessment Framework (LEAF). This presentation will provide rationale for the program design, field sampling and analyses, selection of leaching testing methods, and preliminary test results.