**Coal Ash Chemistry – Analytical Tips and Tricks for Characterizing CCR Materials and Potential Releases**

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Chemical characterization of coal combustion residual (CCR) materials, including predicting potential releases of constituents from CCR, is critical to developing conceptual site models, evaluating risk, and determining appropriate corrective actions. CCR material characterization presents unique analytical challenges that must be carefully considered to ensure that the data generated are quantitatively accurate and reflective of real-world environmental conditions.

This presentation will provide an overview of the challenges faced in characterizing CCR material and in determining the rate of release of CCR related parameters under normal environmental conditions. Topics covered will include:

* Constituents of Concern: Overview of the parameters typically associated with CCR materials
* Analytical Methods: Choosing the “right” digestion and analytical methods
* Analytical Problems: Known interferences and stability issues for specific parameters
* Environmental Transport: Overview of leaching methods and pore water analysis
* Forensic Analyses: Techniques to help differentiate sources of contamination

This presentation will address analytical methodologies, challenges, and potential pitfalls associated with CCR material characterization efforts. An overview of techniques will be presented with recommendations for generating accurate data that is representative of real-world conditions.