

# **The Use of Neutral Leachate Test Data in Indiana's Coal Combustion By-Product Disposal Program**

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## **ABSTRACT**

The disposal of Coal Combustion By-Products (CCBs) in active coal-mines has been occurring in southwestern Indiana since 1989. During this 15-year time period, a total of over seven million tons of ash material has been deposited in nine surface mines. The approval to dispose of CCBs is an arduous process including characterization of the disposal site's hydrogeologic setting, a qualitative and quantitative analysis of the effects of CCB placement within that setting and characterization of the ash material through bulk, 18-hour and 30-day neutral leachate tests. Quarterly evaluation of the ash, as well as monitoring of the surface and ground water at the site, is maintained throughout the active disposal phase and through final bond release.

Results of surface and ground water data collected from the Universal Ash Site (UAS) in Terre Haute, Indiana, suggest the neutral leachate test ASTM D 3987-85, "Shake Extraction of Solid Waste With Water" can generally provide reliable information on anticipated concentrations of the eight Resource Conservation and Recovery Act metals. However, when comparing the leachate test results for other metals (i.e. boron and molybdenum) with results from samples collected at the UAS, some of the field samples contain higher concentrations than indicated in the leachate analysis.

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