

ATTACHMENT 32
Evaluation of Subsurface Minerals of Economic Value
Special Waste Landfill Permit
Big Sandy Plant – Ash Pond Closure
Lawrence County, Kentucky

According to the Kentucky Geological Survey geologic quadrangle map for Fallsburg, Kentucky-West Virginia (GQ-584), there is a presence of coal below the site. It should be noted however, that the current permit application is for the closure of an existing fly ash pond. Thin coal seams below the site exist below the layers of unconsolidated fly ash; alluvium, and; sedimentary rock consisting of siltstones, sandstones, and shale.

The existing fly ash layer at the site ranges in thickness throughout the facility. Work performed by Geosyntec in 2010 indicated the fly ash within the pond ranged between 60 to 100 feet in thickness. In 2004, FMSM reported the residual soils below the fly ash to range from approximately three feet to thirty feet. This was confirmed in 2010 by Geosyntec, reporting the thickness of the alluvium under the ash to consist between 4 and 30 feet of soil.

One of six borings advanced in 2010 for the well installation reported encountering one coal bed. The borings performed in 2010 by AEP were located in the vicinity of the Horseford Creek, outside of the ash placement area. The well identified as MW-1010, located west-southwest of the existing Saddle Dam, was reported to encounter two coal beds within the shale layer at approximately 35 and 80 feet below ground surface. No coal was encountered during boring within the fly ash pond.

Four of the twenty borings advanced in 2012, observed by URS staff encountered coal seams ranging from elevation 655 feet to 772 feet. The coal seams were encountered at the following borings: HB-1, HB-5, PB-6, and SB-6. The boring logs are included as part of the **Hydrogeologic Site Investigation Report** as part of **Attachment 30**.