

Water Quality Changes Related to CUB Bulk Placement at the Rostraver Airport

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ABSTRACT

A structural fill at the Rostraver Airport was constructed of Low Permeability Cementitious Material (LPCM), a stabilized product made from FGD, fly ash, quicklime and bottom ash. Five pre construction water samples were collected at six (3 up gradient and 3 down gradient) surface sampling points and at eight private residences near the airport. After the start of construction, samples were collected on a quarterly basis between January 2001 and December 2003. Discharge from the expansion area was sampled at two points. None of the water samples obtained at the up gradient and down gradient sampling points exceeded state mandated action levels or primary drinking water standards. A Scatterscore, based on the differences in the degree of overlap of the ranges of measured values and medians for all parameters, calculated for up/down gradient combinations indicated random change. Scatterscores of "Before" and "After" samples collected at the down gradient sampling points were more negative, due to the presence of several trace elements in the "After" samples that were not detected in the "Before" samples. In the samples collected at the private residences, none of the concentration values equaled or exceeded the action levels or PDW standards. The Scatterscore values indicated random change. Changes in water quality at the up gradient and down gradient sampling points and at residences near the Rostraver site are relatively small. They appear to be random and unrelated to the use of LPCM in the runway expansion project.

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