Current and Potential Uses of Coal Ash in Maryland Industries

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Overview
- Maryland produces 60% of its electricity from 8 coal burning power plants
- 1.5 million tons of coal combustion products produced annually
- 700,000 tons beneficially used
  - Construction of highway embankments
  - Surface mine reclamation
  - Additives to concrete
  - Fuel for cement kilns
  - Flowable fill

Flowable Fill
- 30,000 tons used in 2004
- Setting utility lines
- Filling sinkholes
- Filling voids in deep coal mines

Potential Massive CCP Beneficial Uses
- Mine tunnel grouting
  - Prevent subsidence
  - Mitigate acid mine discharge (AMD)
  - Opens new areas to economic development
- Capping mine spoils piles
  - Prevent infiltration and AMD formation

Low Permeability Mine Spoils Piles Cap
- Capping mine spoils piles
  - Oxygen rich recharge + pyrite = AMD
  - CCP material used in soil caps limit permeability and AMD
- Track record of similar successful projects
  - ACOE
  - EPA
  - State of PA

Coal Sources and CCP Distribution at Coal-Fired Power Plants in Maryland

Sources of Coal for MD Power Plants (2004)


Disposition of CCPs in 2004

Tons of CCPs Produced in 2004

All CCPs sold to the cement, construction, and flowable fill markets.

Expanded Use
- Increased use by Maryland cement industry
  - Fuel
  - Component
- Prevention of groundwater conversion to acidic conditions by capping above ground, surface coal waste
- Stream flow restoration
- Increased use to fill karst voids and sinkholes
- Increased use to fill areas of subsidence due to mine voids
- Increased use to fill mine voids to prevent acid mine drainage

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