

# **Considerations for the Future Regulation of the Beneficial Uses of Coal Combustion Byproducts (CCBs)**

## **General**

1. Should the regulation indicate approved or banned beneficial uses for specific CCB types (fly ash, bottom ash, fgd sludge)?
2. Should there be an application process for approval prior to any CCB being beneficially used?
3. If there is an approval process, what criteria should be considered?
4. Should each beneficial use be subject to a permit or should there be a “permit by rule” approach?
5. How to address speculative accumulation versus storage?
6. Should all beneficial uses of CCBs involving land placement require a liner and/or a cap?
7. Should existing standards/protocols (such as ASTM) be referenced or cited in the regulations?
8. What public notification requirements should apply for beneficial use?
9. Depending on the type of use, how should fugitive emissions, stormwater, etc... be controlled?

## **Products vs. Byproduct**

10. What, if any, should be the Department’s role in approving the manufacture of products from a byproduct?
11. Automatic approvals/exemptions for CCBs used in manufactured products? If so, would manufactured products need to be defined?

## **Concrete Applications**

12. Should fly ash be used for concrete manufacturing and use in building material?
13. Shall ASTM classification of flyash (Class F with 2-6% CAO and Class C with 15%-35% CAO) be followed to provide adequate material strength for all engineering activities?

## **Structural Fill**

14. How to define structural fill—roadway embankment, development projects?
15. Need for liner and/or cap? If not, what criteria/standards would need to be met?
16. Is a concrete or asphalt road surface impermeable enough to be considered a liner?
17. How should structural fills be defined and regulated?
18. Should there be a quantity limit specified in regulation or by permit?
19. Should there be a minimum distance requirement for the proximity of the CCBs and the groundwater table?
20. How should structural fills be monitored?

21. Are there areas where structural fill would never be allowed or special conditions apply-Chesapeake Bay Critical Area, source water protection areas, wetlands, etc.?
22. Should there be minimum distances specified for the proximity of structural fills to potable water sources?
23. What type of CCB characterization should be done? Toxicity Characteristic Leaching Procedure (TCLP) or Synthetic Precipitation Leaching Procedure (SPLP) or Synthetic Groundwater Leaching Procedure (SGLP)?
24. How should an engineered structural fill and flowable fills be distinguished?

### **Agricultural Applications**

25. What should be the role of the Maryland Department of Agriculture?
26. Should the use of CCBs be allowed in agricultural applications that result in products grown for human consumption?
27. What criteria should be met for agricultural applications?

### **Other Uses**

28. How should other CCB uses such as those listed below be addressed:
  - Drainage material/pipe bedding
  - Abrasive on roadways, sidewalks for antiskid control and/or deicing
  - Dredge spoil utilization
  - Control of mine fires
  - Grouting/sealing of bedrock fractures/sinkholes
  - Wallboard manufacture
  - Extraction/recovery of CCB constituents

### **Future Land Use**

29. What notifications, such as a deed amendment, should be provided to future landowners?
30. Should there be deed restrictions?
31. How should future development be regulated such that any disturbance to CCBs does not impact human health and the environment? This includes the trenching of utility trenches as well as major redevelopment over an ash placement/fill/disposal site.