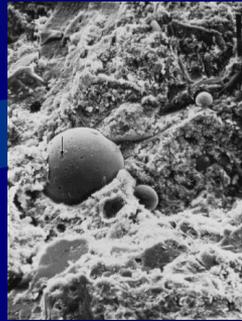


Recent Developments in CCP Beneficial Use



2017 International Coal Conference

Pittsburgh, PA

September 8, 2017

American Coal Ash Association



American Coal Ash Association

- Founded in 1968
- Headquartered in Farmington Hills, MI
- 140 members – utilities, marketers, contractors, equipment suppliers, consultants, academics
- Active with similar organizations around the world



ACAA Mission

The mission of the American Coal Ash Association is to encourage beneficial use of CCP in ways that are

- *environmentally responsible,*
- *technically sound,*
- *commercially competitive,*
- *supportive of a sustainable global community.*

Issues

- EPA Rulemaking Hangover
- Demand
- Supply
- New EPA Assistance?
- 2016 Production & Use



EPA CCR Regulation

- Rulemaking started in 1976
- Published on April 17, 2015
- Subtitle C preference
- Litigation continues
- Review requested



Demand

- Fly ash for use in concrete mixtures and FGD gypsum use in wallboard products at historic levels
- FGD gypsum use in agriculture weak due to low crop prices
- Other CCP uses unsteady
- Cenosphere use collapsing



Supply

- Natural gas prices
- Moderate weather
- Logistics
- Combustion injections
- Specifications
- **Import activity**
- **Reclaiming**



Market share for coal

- Today's market share is about 30% to 35% and will continue at this level for the foreseeable future
- Coal fired plant retirements are slowing
- Growth for natural gas limited by transmission
- Grid reliability is a concern



Logistics

- Fewer generating stations means more storage is needed
- More trucks, rail cars, and vessels are needed



Specifications are evolving

- ASTM C 618 and AASHTO M 295 used for concrete mixtures
- Proposals under consideration which will increase supply of compliant fly ash
- Combustion stream injections recognized
- Blending being considered



Imports to the Rescue?

- Imports have been coming to the US
- Bottom ash has accounted for most imports
- Government subsidized activity
- Restrictions include vessel availability and terminal space



Reclaiming stored fly ash

- Historic activity at relatively low volumes
- Santee Cooper/SEFA project began over two years ago
- Pond closures creating new interest
- States have considered mandates



EPA to the Rescue?

- C2P2 success
- C2P2 shut down
- Son of C2P2 coming?



2016 CCP Production & Use

- Production down about 10%
- **Use down about 2%**
- Beneficial use to production ratio up to almost **55%**



Thank You

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