What is ACAA?

• ACAA was founded in 1968

• Headquartered in Farmington Hills, MI

• 130 members including utilities, marketers, contractors, equipment and material suppliers, engineering consultants, and academics.

• Member of the World Wide Coal Combustion Products Network
Our Mission

• The mission of the ACAA is to encourage the beneficial use of coal combustion products in ways that are protective of the environment, technically appropriate, commercially competitive, and supportive of a more sustainable society.
CCPs in Transportation

- Fly ash – Portland cement as raw feed, concrete mixtures as a supplementary cementitious material, base stabilization, structural fill as an aggregate
- Bottom ash – Portland cement as raw feed, structural fill as an aggregate, (concrete mixtures on the horizon)
- FGD gypsum – Portland cement manufacture to control rate of hardening
Fly ash in concrete mixtures – the good things

• Improves compressive and flexural strength
• Reduces permeability
• Mitigates ASR
• Improves workability
• Reduces GHG by reducing the amount of Portland cement used
Fly ash in concrete mixtures – the bad things

• May extend setting time increasing labor costs
• May result in extended stripping times slowing use of formwork
• May cause finishing problems in floors and slabs
• May cause air entrainment problems
Fly ash in concrete mixtures – the ugly things

• Coal-fueled power plants are injecting various materials to control emissions. These injections may make the fly ash unusable in concrete mixtures.

• Coal-fueled generation is declining resulting in fewer sources increasing logistical problems.

• Demand is running well-ahead of supply.
A critical need

- Departments of Transportation are facing major durability issues in concrete mixtures used in pavements and bridges.
  
1. Alkali-silica reactivity (ASR)
2. Premature deterioration due to deicer applications
Harvesting can help

• “Harvesting” is recovery of CCP from storage in landfills and ponds.

• It is estimated that well over 2 billion tons of CCP is in storage in the U.S.

• Storage practices have varied widely.

• Harvesting has been used for many years on a small scale.
ASTM International Assistance

- **ASTM E3183-18 Standard Guide for Harvesting Coal Combustion Products Stored in Active and Inactive Storage Areas for Beneficial Use**

- This guide provides a framework to address critical aspects related to the harvesting of CCPs placed in active (operational) and inactive (closed or no longer receiving CCPs) storage areas. These storage areas may be used for wet or dry material, and may be located at active or inactive facilities.
What you can do....

• Learn if you have landfills or ponds that have been used for CCP storage. If so, investigate what materials are in those landfills and ponds.

• Talk to your Department of Transportation and see if they have an adequate supply of CCP. If not, open a conversation on harvesting from local facilities.

• Engage the owners of the landfills and ponds (usually a utility).
Thank You!

American Coal Ash Association

Name
Phone
Email Address