Industrial Materials Recycling Resources for Region 8 State RCRA Programs

AUGUST 23, 2010 E-MAIL NEWSLETTER ISSUE NO. 3

In This News Brief

This email newsletter is designed for U.S. EPA Region 8 stakeholders who have an interest in news and technical resources helpful for making beneficial use determinations and supporting and increasing industrial materials recycling under the Resource Conservation Challenge (RCC).

Coal Combustion Production and Utilization in Region 8

Each year, the American Coal Ash Association (ACAA) conducts a nationwide survey of electric utilities to capture statistics about production and use of coal combustion products (CCPs). The U.S. EPA uses this survey to measure progress against its goal for increasing the safe beneficial use of CCPs.

The ACAA Annual CCP Production and Use Survey represents approximately 60% of the U.S. utility capacity. The results from the 2008 survey for Region 8 only are illustrated below. Not all Region 8 facilities report to this voluntary survey. For example, in 2008, PPL Montana did not report to the ACAA and they are a very large producer.

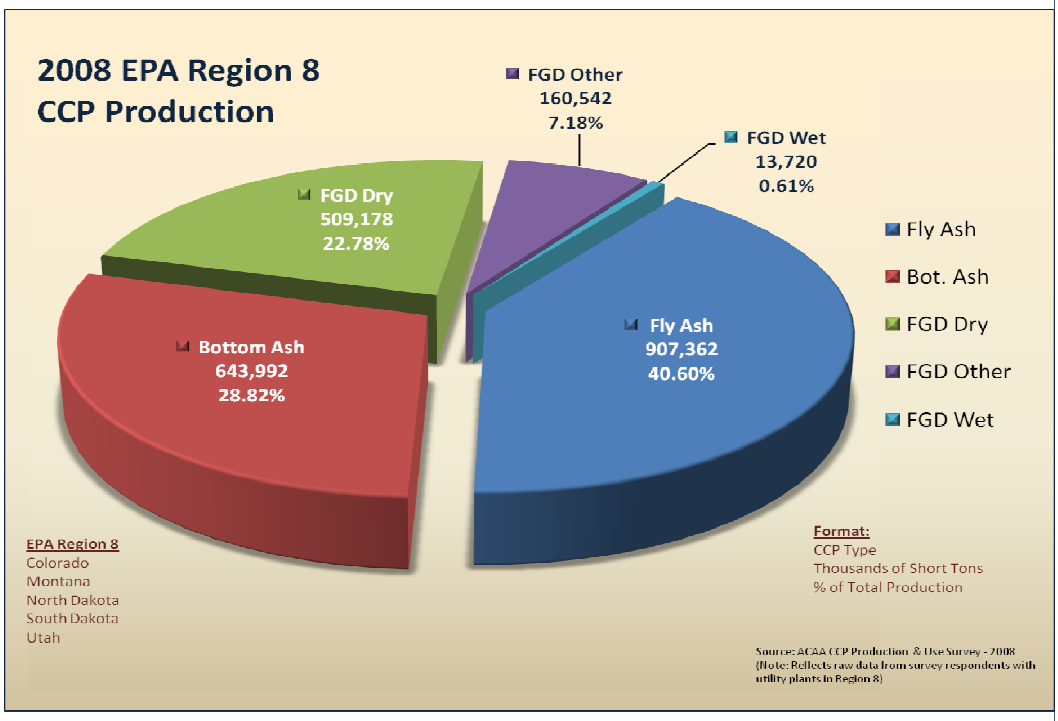
In Region 8, 462,176 short tons of fly ash were beneficially used in concrete. This is equivalent to 51% of the fly ash produced in the Region. Other than fly ash, 1,218,079 short tons of CCPs were beneficially used in other roadway applications.

Applying EPA's Waste Reduction Model (WaRM), the amount of fly ash that was used in the Region in 2008 to displace Portland cement in concrete production was equivalent to reducing greenhouse gas (GHG) emissions by 114,555 MTCE (metric tons carbon equivalent). WaRM was employed using national average default values for landfill gas recovery and transportation distances. The amount of GHGs reduced in Region 8 was calculated by comparing the recycling of the fly ash in concrete versus had it only been landfilled.

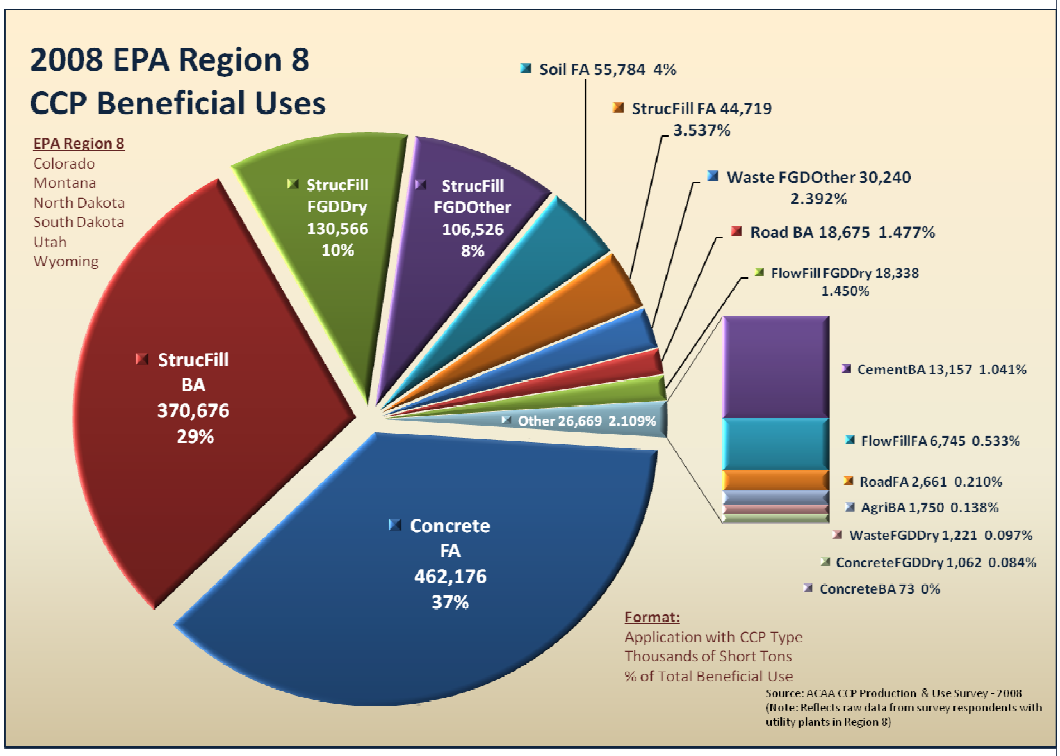
Applying EPA's Greenhouse Gas Equivalencies Calculator, the amount of fly ash beneficially used in concrete was equivalent to the annual GHG emissions from 19,870 passenger vehicles, the CO_2 emissions from burning 543 railcars' worth of coal, and the carbon sequestered by 2,664,681 tree seedlings grown for 10 years.

Visit www.acaa-usa.org/ under "Publications," then "Production & Use Statistics" for national, annual ACAA surveys.

EPA's WaRM model is based on a life-cycle approach (www.epa.gov/warm/)



EPA's Greenhouse Gas Equivalencies Calculator (www.epa.gov/cleanrgy/energy-resources/calculator.html)



Source: DC Goss Consulting, LLC and the ACAA (2009)

For a separate PDF file of these graphics, please contact Kendra Morrison at (303)312-6145 or morrison.kendra@epa.gov.

Coal Combustion Residuals (CCR) Proposed Rule (www.epa.gov/coalashrule)

Coal Combustion Residues (CCR) Proposed Rule

The "Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities," better known as the CCR Proposed Rule, was published June 21, 2010, in the Federal Register.

The rule proposes to regulate coal ash for the first time to address the risks from the *disposal* of the wastes generated by electric utilities and independent power producers. Beneficial use will maintain the RCRA Bevill exemption under the approaches being proposed in the rule.

The comment period for the rule ends on September 20, 2010. There are multiple options for providing comment on the rule:

- Web: www.regulations.gov, search Docket ID No. EPA-HQ-RCRA-2009-0640
- Email: rcra-docket@epa.gov, subject: Attention Docket ID No. EPA-HQ-RCRA-2009-0640
- Fax: (202)566-0272, Attention Docket ID No. EPA-HQ-RCRA-2009-0640
- Mail: Include two (2) copies to Hazardous Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals from Electric Utilities Docket, Attention Docket ID No. EPA-HQ-RCRA-2009-0640, Environmental Protection Agency, Mailcode: 28221T, 1200 Pennsylvania Avenue, NW, Washington, D.C. 20460
- Hand Delivery: EPA/DC, EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. 20460

There are five (5) public hearings planned. Each hearing will have a morning, afternoon, and evening session, starting at 10:00 a.m. (local time) and ending at 9:00 p.m. or later depending on the number of speakers.

Date	City	Location
August 30, 2010	Arlington, VA	Hyatt Regency Crystal City
September 2, 2010	**Denver, CO**	**Grand Hyatt (Welton)**
September 8, 2010	Dallas, TX	Hyatt Regency Dallas
September 14, 2010	Charlotte, NC	Holiday Inn Charlotte (Airport)
September 16, 2010	Chicago, IL	Hilton Chicago

Pre-registration for the hearings and proposed rule information is available at **www.epa.gov/coalashrule/**.

Contractor Toolkit for Recycling and Using Recycled Industrial Materials (www.agc.org/cs/recycling_toolkit)

Contractor Toolkit for C&D and Other Industrial Materials

EPA and the Associated General Contractors (AGC) of America have partnered to promote industrial materials recycling, including construction and demolition (C&D) materials recycling. One product that was created from the partnership is a Contractor Toolkit that serves as an informational resource for recycling industrial materials.

The toolkit provides "how to" sections for contractors who want to (1) reduce and/or reuse C&D materials generated at their job sites, and (2) use recycled industrial materials in the construction or renovation of a structure.

This information resource also provides case studies for using coal combustion products, foundry sands, iron and steel slags, recycled tires, and recycling/reusing C&D materials.

Foundry Sand Beneficial Reuse Directory and Mapping Tool

AFS Mapping Tool **(www.afsinc.org/component/option,com_wrapper/Itemid,254)**

The American Foundry Society (AFS) has put together a Beneficial Reuse Directory to provide users the ability to search by zip code or state to identify sources of spent foundry sands for beneficial use. Foundries are viewable in both listings and Google map views.

AFS Mapping Tool **(www.afsinc.org/component/option,com_mtree/Itemid,193)**

The AFS mapping tool, on the other hand, provides users the ability to search by zip code and radius to identify ready-mixed concrete, asphalt, and Portland cement facilities that may use spent aluminum, iron, and steel foundry sands in their manufactured products. The end-users are available through a listing and Google map views as well.

Market Characterization and Benefits Reports on Beneficial Use of Secondary Materials

EPA funded the development of three (3) reports to look at the costs and benefits of recycling coal combustion products, foundry sand, and construction and demolition materials. These "Waste and Materials-Flow Benchmark Sector Reports" provide an initial assessment of the market dynamics that affect the generation, disposal, recovery, and beneficial use of these materials. The reports, listed below, also provide an assessment of the baseline practices and policies that affect the recovery and use of these materials, and provide an overview of life cycle information available to estimate benefits associated with beneficial use.

- Waste and Materials-Flow Benchmark Sector Report: Beneficial Use of Secondary Materials – Coal Combustion Products, February 12, 2008
- Waste and Materials-Flow Benchmark Sector Report: Beneficial Use of Secondary Materials – Foundry Sand, February 12, 2008
- Waste and Materials-Flow Benchmark Sector Report: Beneficial Use of Secondary Materials – Construction & Demolition Material (draft final in review)

The document on coal combustion products is available from the National Service Center for Environmental Publications (NSCEP) (www.epa.gov/nscep/) by searching on the document name. NSCEP offers the option to obtain a copy as a downloadable PDF.

The document on foundry sand is available from the American Foundry Society (AFS) at www.afsinc.org/content/view/948/283/.

Fostering Technology Innovation: Colorado Department of Transportation

A joint Colorado Asphalt Pavement Association (CAPA)/Colorado Department of Transportation (CDOT) Task Force has developed a draft protocol for contractors to submit non-standard asphalt mix designs for approval by CDOT. The intent of the protocol is to evaluate emerging asphalt technologies such as warm mix asphalt, recycled asphalt shingles mixes, and crumb rubber modified binders, etc. The protocol includes submittal criteria that encompass materials, design, prior performance history, production, and other related information and documents.

You can view the draft protocol on CAPA's website at: www.co-asphalt.com/. At the top of the page, put your cursor on "CDOT," and click on "AIF Task Force." Under "SMA 3 Task Force" is a link to "draft CP 59."

Did You Know?

Region 8 would like to feature state news and case studies in this section of the email news brief. If you have ideas you'd like to contribute, please use the contact information below.

Contact Us

If there is any industrial material, market, specific issue, or other topic you would like to have featured or learn of resources for, please contact Kendra Morrison at morrison.kendra@epa.gov or (303)312-6145.

Region 8's Industrial Materials Recycling (IMR) Program (www.epa.gov/region8/recycling/im.html)

Contact Us

U.S. EPA Region 8

1-800-227-8917

For More Information, Visit EPA's IMR Program Home Page (www.epa.gov/industrialmaterials/)

Author: Kendra A. Morrison, U.S. EPA Region 8