Industrial Materials Recycling Resources for Region 8 State RCRA Programs

APRIL 7, 2009 E-MAIL NEWSLETTER ISSUE NO. 1

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).

EPA Studies the Fate of Metals from the Management of Coal Combustion Products

Changes in air pollution control technologies at power plants can result in the transfer of metals from the flue gas to fly ash and other residues. Concerns have arisen about cross-media transfers of these metals, including the re-emission of mercury from cement kilns, and the release of metals to groundwater and surface water from beneficial uses. There is an on-going effort by the EPA to use a holistic approach to account for the fate of mercury and other metals in coal throughout the lifecycle stages of coal combustion product (CCP) management as pollution control devices are installed in compliance with new rules and standards. EPA's Office of Research and Development's (ORD) studies focus on leaching of metals to groundwater and will include lifecycle comparisons of cement, asphalt, and wallboard production, with and without the use of CCPs.

To access the research reports developed thus far, visit the links below.

"Characterization of Mercury-Enriched Coal Combustion Residues from Electric Utilities Using Enhanced Sorbents for Mercury Control," February 2006 (EPA/600/R-06/008): This report evaluates changes that may occur to coal-fired power plant air pollution control residues from the use of activated carbon and other enhanced sorbents for reducing air emissions of mercury and evaluates the potential for captured pollutants leaching during the disposal or use of these residues. Leaching of mercury, arsenic, and selenium during land disposal or beneficial use of coal combustion residues is the environmental impact pathway evaluated in this report.
http://www.epa.gov/nrmrl/pubs/600r06008/600r06008.html

"Characterization of Coal Combustion Residues from Electric Utilities Using Wet Scrubbers for Multi-Pollutant Control," July 2008 (EPA/600/R-08/077): This report evaluates leaching characteristics of air pollution control residues from coal-fired power plants that use acid gas scrubbers, which may also reduce air emissions of mercury and other pollutants. Leaching of mercury and other constituents of potential concern (COPCs) during land disposal of coal combustion residues is evaluated in this report.

The data presented in this report will be used in a future report to evaluate the fate of mercury and other COPCs from the management of CCPs resulting from the use of multi-pollutant control technologies.
http://www.epa.gov/nrmrl/pubs/600r08077/600r08077.htm

Clean Air Mercury Rule (CAMR) - Update

EPA's Clean Air Mercury Rule **(www.epa.gov/air/mercuryrule/index.htm)**

On March 15, 2005, EPA issued the Clean Air Mercury Rule (CAMR) to permanently cap and reduce mercury emissions from coal-fired power plants for the first time ever. On February 8, 2008, the D.C. Circuit vacated EPA's rule removing power plants from the Clean Air Act (CAA) list of sources of hazardous air pollutants. At the same time, the Court vacated CAMR. EPA petitioned the Supreme Court to reverse the decision. The Obama administration has abandoned the government's effort to present the merits of the CAMR program before the Supreme Court. It has asked the Court to withdraw the petition. Therefore, EPA will establish a Maximum Achievable Control Technology (MACT) standard to address mercury from power plants. This typically involves 90% control within three years after a determination is passed. The time frame for the determination is unclear, but possibly within the next three years. In the meantime, an assessment of mercury impacts from new power plants must be made before a state may issue a permit for the plant. Region 8 states are going back and looking at new plant applications to make that determination.

In the absence of CAMR, some states have elected to impose controls on their own through mercury rules addressing emissions, tracking, and reporting. In Region 8, Colorado, Montana, and Utah are doing so. In Colorado, the first set of controls will be put in place by 2012 for some sources, followed by the remainder in 2014. Montana has similar requirements, with most controls (90%) implemented by 2014. Utah is maintaining a state-only rule to monitor mercury from power plants beginning in 2011.

Risk Compendium Update

EPA's Industrial Materials Recycling Program **(www.epa.gov/industrialmaterials/)**

The Risk Compendium, originally titled "Framework for Evaluating Risk of Industrial Materials Recycling," is a materials assessment framework for addressing key issues and questions to ensure long-term protection of human health and the environment. The compendium provides a number of evaluation methods and useful tools to assist federal, state, and local personnel making beneficial use decisions. Approaches providing conservative estimates of risk include a lines-of-evidence approach, a screening approach, and a risk assessment modeling approach.

In April 2008, EPA hosted a workshop in Denver for states to discuss the draft document. EPA heard from attending states about significant barriers encountered related to risk or perceived risk, and interest was expressed for material and application based numerical guidelines to determine safety. States also asked for assistance in determining appropriate test methods. Revisions to the tool have been concentrated on the Tools Library and incorporating case studies from states. The revised document was sent out for comment in the Fall of 2008 and will soon undergo final management review for completion.

Construction and Demolition Materials Recycling (www.epa.gov/cdmaterials/)

Finding C&D Material Recyclers

Have you received a lot of calls from contractors and the public about where to recycle construction and demolition (C&D) materials in your state? There are several resources you can direct them to in their search for recyclers and reuse stores.

Construction Waste Management Database

Whole Building Design Guide's Construction Waste Management Database contains information on companies that haul, collect, and process recyclable debris from construction projects. Created in 2002 by the Government Service Administration's (GSA) Environmental Strategies and Safety Division to promote responsible waste disposal, the database is a free online service for those seeking companies that recycle construction debris in their area. One can search by state, zip code, or material(s) recycled. The database can be accessed at: **www.wbdg.org/tools/cwm.php**.

The **Construction Materials Recycling Association (CMRA)** is a 501(c)(3) organization that promotes the recycling of C&D materials. The "Find a Recycler" link provides a list of member C&D materials recyclers at: **www.cdrecycling.org/materials.html**.

The **Building Materials Reuse Association (BMRA)** is a non-profit educational organization whose mission is to facilitate building deconstruction and the reuse/recycling of recovered building materials. BMRA has a directory of members that operate reuse stores at: **www.bmra.org/listings/**.

Habitat for Humanity (HfH) operates many "ReStores" across the country. These are retail outlets where used and surplus building materials are sold. Proceeds from ReStores help fund the construction of HfH houses. **www.habitat.org/cd/env/restore.aspx**

ReSource operates reclaimed building material outlets in Colorado. ReSource accepts donations of reusable building materials and then resells them to the public. Everything has been donated by homeowners, businesses, contractors, or deconstruction experts. ReSource offers onsite pick-up and delivery, and architectural salvage and deconstruction services: **www.resourceyard.org/**.

Carpet America Recovery Effort (CARE) is a joint industry-government effort to increase the amount of recycling and reuse of post-consumer carpet and reduce the amount of waste carpet going to landfills. CARE maintains a list of carpet reclamation centers and recycle processors: **www.carpetrecovery.org/waste.php.**

U.S. Green Building Council
(www.usgbc.org/)

Contact Us

U.S. EPA Region 8

1-800-227-8917

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

Building with Industrial Materials

Using industrial materials to replace non-renewable virgin materials in building construction provides environmental, economic, and performance benefits. As green building practices focus on energy efficiency, the impact of building materials on the total energy consumption of buildings will become more significant. EPA has developed a new fact sheet **"Using Recycled Industrial Materials in Buildings" (October 2008, EPA530-F-08-022)** to share the benefits for using industrial materials in buildings, and illustrate a variety of applications for these materials in the design and construction of buildings. The fact sheet will soon be posted on EPA's Industrial Materials Recycling Program website at **www.epa.gov/industrialmaterials/**.

Did You Know?

Designing with industrial materials is a key component of green building and can earn points in green building certification programs, such as the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED)® green building rating system. The following table illustrates the materials reuse/recycling credits that can be earned under LEED.

Industrial Materials Recycling and LEED® Credits	Points
Using construction and building products containing recycled content	1-2
Reusing building materials and products	1-2
Diverting C&D materials from disposal	1-2
Using materials extracted, processed, and manufactured locally	1-2
Total Possible Points	8

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.

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