

MEMORANDUM OF UNDERSTANDING
Between
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
And
THE UNITED STATES DEPARTMENT OF AGRICULTURE-AGRICULTURAL
RESEARCH SERVICE
Agreement # 58-0202-8M-032

I. Purpose

The purpose of this Memorandum of Understanding (MOU) is to formally create a mutually beneficial working relationship between the United States Environmental Protection Agency (EPA) and the United States Department of Agriculture-Agricultural Research Service (USDA-ARS) with regard to the Coal Combustion Products Partnership (C2P2).

II. Background

The Coal Combustion Products Partnership (C2P2) was founded in 2001 and is part of EPA's Resource Conservation Challenge (RCC). The objective of C2P2 is to promote the beneficial use of coal combustion products (CCPs), as a means to reduce landfill disposal, the use of virgin resources, and greenhouse gas emissions; and to increase energy benefits. C2P2 aims for the following goals:

- Reduce adverse effects on air and land by increasing the use of CCPs to 50 percent in 2011 from 32 percent in 2001.
- Increase the use of CCPs as a supplementary cementitious material (SCM) in concrete by 50 percent, from 12.4 million tons in 2001 to 18.6 million tons in 2011, thereby decreasing greenhouse gas emissions from avoided cement manufacturing by approximately 5 million tons.

C2P2 was conceived as a collaborative effort among government and industry entities. Current cosponsors besides EPA and USDA-ARS are the American Coal Ash Association (ACAA), the Utility Solid Waste Activities Group (USWAG), the Department of Energy (DOE), the Federal Highway Administration (FHWA), and the Electric Power Research Institute (EPRI).

Coal combustion products have significant potential for beneficial reuse and have been successfully used in numerous non-agricultural applications, including, but not limited to, use in concrete and grout products, cement, flowable fill, road base material, structural fill and embankments, mineral filler in asphalt, snow and ice control, blasting grit, roofing granules, wallboard manufacture, and waste stabilization. In addition, flue gas desulfurization (FGD) gypsum and other CCPs are beginning to be used in agriculture as soil amendments to improve soil conditions for crop production and to protect and enhance soil, water, and air resources. Potential beneficial uses of CCPs in agriculture include: (1) control of soil erosion; (2) improving water infiltration, storage, and use in soils; (3) remediation of saline and sodic soils; (4) use as a nutrient source for crops; and (5) reducing the movement of nutrients, sediment, and agricultural chemicals to water and air.

There are numerous environmental, economic, and performance benefits that result from using CCPs. Environmental benefits can include reduced greenhouse gas emissions, decreased use of landfills, less use of virgin resources, and improved soil, water, and air quality. Economic benefits can include reduced costs for CCP producers through avoided disposal costs and revenue from sales; reduced costs for CCP users (since CCPs are often less expensive than the materials they replace); and increased production of food, feed, fiber, and energy crops.

III. Understanding/Commitments

Under this MOU, EPA and USDA-ARS resolve to use their complementary authorities and programs to work cooperatively to increase the beneficial reuse of CCPs. Specifically, the agricultural use of CCPs requires documentation of the effectiveness, safety and environmental benefits of these materials across a range of agricultural uses. Benefits and risks of these materials, including bioavailability of trace elements, such as mercury, arsenic and selenium need to be determined to satisfy the concerns of producers, generators, regulators and the public. Guidelines need to be developed for specific uses of CCPs to help farmers and their advisors make appropriate agricultural management decisions. To achieve these objectives, EPA and USDA-ARS resolve to work together in the following areas:

- Participate actively in program planning to advance C2P2 priorities.
- Meet with project and management leaders biannually to review progress and coordinate C2P2 activities.
- Clearly articulate specific EPA and USDA-ARS needs related to the agricultural uses of CCPs to project and management leaders.
- Coordinate EPA-funded agricultural studies with USDA-ARS, including those studies or research conducted to assess benefits and risks of CCP use in agriculture.
- Participate in a retrospective review of programs on the agricultural use of CCPs.
- Participate in C2P2 meetings and events (e.g., workshops) to provide agency representation and technical support on agricultural issues.
- Participate in the planning of C2P2 events that have an agricultural component, including a workshop on FGD material use in Atlanta in October, 2007 and the 2008 Byproducts Summit, which will be an opportunity to focus on the agricultural use of other industrial materials, such as foundry sands, in addition to CCPs.
- Develop and publish documents that have an agricultural applications component, including a booklet on FGD gypsum use in agriculture and a booklet on foundry sands as a reuse material.

- Participate in the FGD Network to develop beneficial agricultural uses of CCPs insofar as the mission of C2P2 overlaps with the mission of the FGD Network in promoting the use of FGD materials.
- Work with the agricultural community to promote appropriate increased use of CCPs in agricultural applications.

Following execution of this MOU, EPA and USDA-ARS resolve to work together to develop agency-specific plans of work describing each agency's roles/responsibilities for implementing the actions listed above.

IV. Limitations

This MOU does not create any right or benefit, substantive or procedural, enforceable by law or equity against USDA-ARS or EPA, their officers or employees, or any other person. This document does not require either agency to incur new financial obligations as a result of its execution.

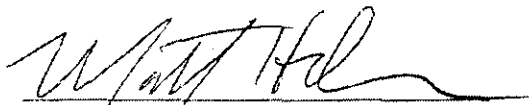
USDA-ARS acknowledges that the name "C2P2" is a mark owned by EPA, and any use of the mark by USDA-ARS inures to EPA's benefit.

Nothing in this MOU shall be construed to authorize or permit any violation of any Federal, State or local law, including, but not limited to, any environmental law administered and/or enforced by EPA.

V. Administration

This MOU is to take effect upon the signature of both parties and terminate after a period of three (3) years from the date of signature, at which time this MOU may be extended per the written decision of both parties. Either party may terminate this MOU at any time by providing at least 30 days written notice to the other party. Further, this MOU may be amended at any time per the written decision of both parties.

Signed:



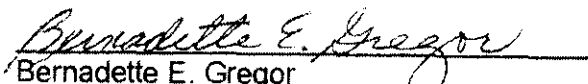
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