

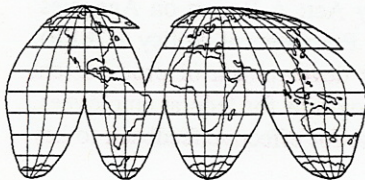


ASH AT WORK

AMERICAN COAL ASH ASSOCIATION, INC. • 1913 I STREET, N.W. • SIXTH FLOOR • WASHINGTON, D.C. 20006 • 202-659-2303

March 1994

Coal Ash - Earth's Solution



To Building the Future

ASH AT WORK *Newsletter* American Coal Ash Association

Samuel S. Tyson, P.E.
Executive Director

DOE BARRIERS STUDY Report Due from U.S. Department of Energy

The U.S. Department of Energy (DOE) report, Barriers to the Increased Utilization of Coal Combustion/Desulfurization Byproducts by Government and Commercial Sectors, remains in draft form somewhere within the federal bureaucracy. Even though DOE received enthusiastic support for this effort in the public fora held during 1993, the deadline for publishing the report has slipped into 1994 with no statement from DOE as to a revised date for release of the report.

The DOE "barriers report" resulted from Section 1334 of the Energy Policy Act of 1992 [Public Law No. 102-486, October 24, 1992] in which the U.S. Secretary of Energy was charged with the task of conducting a detailed and comprehensive study on the "institutional, legal and regulatory barriers to increased utilization of CCBs by potential governmental and commercial users" and reporting the findings to Congress. There is no reason to believe that the report is considered controversial at any level within DOE, and ACAA plans to obtain copies of the report for distribution to its members as soon as the report is available.

ACAA WILL HOLD APRIL 1994 MEETING IN HOUSTON Joint Meeting with Texas Group

ACAA's south-central ash use workshop and committee meetings, scheduled for the week of April 18, 1994 in Houston, Texas, will be the occasion for a joint meeting with the Texas Coal Ash Utilization Group (TCAUG). Please see the announcement attached to this newsletter and contact ACAA for more information.

FEDERAL PROCUREMENT OF ENVIRONMENTALLY PREFERABLE PRODUCTS

ACAA Joins EPA Effort to Develop Guidance

The U.S. Environmental Protection Agency (EPA) held a public meeting on February 7, 1994, in Arlington, Virginia to obtain public testimony and solicit comments on EPA's "Concept Paper for Development of Guidance for Determining 'Environmentally Preferable' Products and Services" which served as a basis for discussion in the meeting. The EPA document and the February 7 meeting were a direct result of requirements in Section 503 of Executive Order No. 12873 in which EPA is directed to issue guidance that federal agencies should use "in making determinations for the preference and purchase of environmentally preferable products."

ACAA provided supportive comments to EPA regarding the concept paper in a letter of March 10, 1994 to EPA's Washington, DC office. ACAA agreed with EPA's concept for developing guidance because it appears to be very appropriate for a variety of products and services, and could increase the use of recycled materials such as coal combustion byproducts (CCBs).

ACAA pointed out to EPA that even though coal fly ash use in cement and concrete was the subject of EPA's first RCRA 6002 procurement guideline, and notwithstanding the laudable efforts by EPA to make available information concerning this important resource, ACAA's annual industry report of CCB production and use, as well as the (December 1992) "Report to Congress--Resource Conservation and Recovery Act: A Report on Agencies' Implementation for Calendar Years 1990 and 1991" from the Office of Federal Procurement Policy (OFPP), demonstrate that more must be done to assure compliance. In concert with EPA's development of procurement guidance, ACAA suggested that EPA could pursue development of more specific programs for federal employees, such as accounting guidelines and a related awards program which agencies would use for effective feedback to key personnel.

ACAA suggested that continuous improvement should be an important aspect of EPA's approach because it would allow both for advancements in technology and for broadening the implementation of sound demonstrated technologies. As an example, ACAA pointed out that CCBs other than fly ash--bottom ash, boiler slag and flue gas desulfurization material--are environmentally preferable to numerous competing manufactured products such as lime, mineral fillers, soil, sand, gravel and crushed stone because the CCBs are "ready to use" recovered materials the purchase and use of which saves natural resources, avoids energy use and reduces manufacturing activities which generate waste and pollution (e.g., CO₂). ACAA reminded EPA of its previous recommendation that the use of these CCBs provides an environmentally sound alternative to disposal.

ACAA STAFF/TEAM

Available to Assist ACAA Members and Others

ACAA's latest addition to its staff is Executive Assistant, Earline Marshall, who joined ACAA in January 1994. ACAA's complete team of staff members stand ready to assist members and others with all of their questions and needs associated with CCBs, meetings and related issues. Please get in touch with any of the following staff members by telephone, fax, or in writing.

STAFF

Samuel S. Tyson, P.E.
Thomas H. Blackstock, Jr., P.E.
Sandra A. Nowak
Jill M. Hunger
Earline T. Marshall

Executive Director
Director of Technical Services
Manager of Finance & Administration
Communications Coordinator
Executive Assistant

EARTH DAY 1994
ACAA Sponsors Exhibit Jointly with EEI and EPRI

The 1994 celebration of "Earth Day" in Washington, DC will be held during the week of April 18. Like previous Earth Day celebrations the 1994 event is expected to be well attended by the public, government officials, environmental groups and the media.

An exhibit jointly sponsored by ACAA/EEI/EPRI will be on display April 19-20, 1994 and will be attended by ACAA staff members Jill Hunger, Communications Coordinator and Tom Blackstock, Director of Technical Services. The timing and importance of the Earth Day exhibit will prevent both Jill and Tom from attending ACAA's workshop in Houston, however Tom will arrive in Texas in time to attend ACAA's technical committee meeting.

The theme of the ACAA/EEI/EPRI exhibit will be the **environmental benefits of using coal combustion byproducts (CCBs)--Energy Savings:** For every 1 ton of CCBs used, the energy equivalent of up to 1 barrel of oil use in other industries can be saved; **Pollution Prevention:** For every 1 ton of CCBs used, the production of more than 3.5 tons of CO₂ emissions from other industries can be prevented; **Disposal Avoidance:** CCBs are abundant mineral resources which should be used and not disposed; **Cost Reduction and Revenue Generation:** CCB sales reduce disposal costs to electric utilities and ratepayers while providing income for recycled product manufacturers and distributors; and **Resource Conservation:** The use of CCBs allows natural resources that would otherwise be used to be conserved.

The ACAA/EEI/EPRI exhibit will contain CCB samples and a variety of products that contain CCBs. The exhibit also will contain selected photographs of CCB applications, and a video currently being produced by ACAA and others to tell the "coal ash story" will be displayed continuously on a television monitor.

A portion of the exhibit will contain autoclaved cellular (ACC) building units as well as free samples. Because the ACC material and its applications and benefits can be readily understood by the expected attendees, the ACC is expected to serve as a major attraction at the ACAA/EEI/EPRI exhibit.

ACC production currently is being demonstrated with a pilot plant that is traveling throughout the USA in a project conducted by the Electric Power Research Institute and North American Cellular Concrete in cooperation with several electric utilities: Alabama Power; Georgia Power; New England Power; New York State Electric and Gas; Niagara Mohawk; Ohio Edison; PSI Energy; Sierra Pacific Power; Tennessee Valley Authority; and United Illuminating.

The Earth Day attendees will be given a clear message that electric utilities, in supporting the development of ACC and the numerous other products and applications on display, are fulfilling their commitment to environmental leadership and recycling.

ACAA's SOUTHEASTERN REGION MEETING A SUCCESS
January 1994 Meetings Well Attended

ACAA's Southeastern Region Ash Use Workshop was held during the week of January 24, 1994, in Clearwater Beach, Florida. The workshop, "Current Developments & Innovations--Coal Combustion Byproduct Use in the Southeastern Region," plus the meetings of the various standing committees including Communications & Marketing, Technical and Government Relations, were attended by some ninety individuals registered throughout the week. Participation in the standing committee meetings was particularly rewarding as these committees plan, monitor and guide the basic activities within ACAA's business plan programs.

ASTM STRUCTURAL FILL TASK GROUP

Preparation of Guidance Document on Track

Concurrently with ACAA's meetings in Clearwater Beach, Florida, the ASTM E50.03 Task Group on Structural Fill held a meeting to review the draft document, "Standard Guide for the Use of Coal Combustion Fly Ash in Structural Fills." The document was submitted in February 1994 to the full E50.03 committee for balloting. The task group had a record attendance with about thirty participants. The timing and location afforded participation by many ACAA members. The ASTM E50.03 task group is chaired by Gary Brendel, GAI Consultants.

TRANSPORTATION RESEARCH BOARD

ACAA Attends Washington, DC Meetings

The Transportation Research Board held its annual meeting in Washington, DC during the week of January 9, 1994. Tom Blackstock, ACAA's Director of Technical Services, attended several technical sessions and committee meetings concerning fly ash in concrete and in soil stabilization. Two committees, A2E05 on Chemical Additions and Admixtures for Concrete, and A2J01 on Cementitious Stabilization, reviewed research needs statements and reviewed activities from the preceding year.

EPRI WORKSHOP

High-Volume Fly Ash Concrete

On March 18, 1994, the Electric Power Research Institute (EPRI) held a workshop on "Advantages of Concrete Containing High Volumes of Fly Ash" in conjunction with the spring convention of the American Concrete Institute in San Francisco, California. Sam Tyson, ACAA's Executive Director, presented information on the status of regulatory issues related to the utilization of coal combustion byproducts. Other presentations dealt with the properties and performance of high-volume fly ash concrete. The attendees included representatives from research organizations, universities and electric utilities.

CONSTRUCTION INDUSTRY COALITION

ACAA Maintains Association Contacts

ACAA participates on a technical level with a number of other construction industry associations through the Construction Industry Materials and Services Suppliers Coalition (CIMSSC). This coalition allows ACAA to be informed on a number of diverse issues without needing to devote substantial resources to the effort.

The members of CIMSSC, in addition to ACAA, are the American Concrete Pipe Association (ACPA), the American Consulting Engineers Council (ACEC), the American Society of Civil Engineers (ASCE), the Asphalt Institute (AI), the Associated Equipment Distributors (AED), the Construction Industry Manufacturers Association (CIMA), the National Aggregates Association (NAA), the National Asphalt Pavement Association (NAPA), the National Corrugated Steel Pipe Association (NCSPA), the National Lime Association (NLA), the National Ready Mixed Concrete Association (NRMCA), the National Stone Association (NSA), the Portland Cement Association (PCA), and the Wire Reinforcement Institute (WRI).

FLOWABLE FILL SEMINARS AND DEMONSTRATIONS Ohio Ready Mixed Concrete Association (ORMCA)

ACAA's Executive Director Sam Tyson and Director of Technical Services Tom Blackstock attended a planning meeting in Columbus, Ohio on March 31, 1994, at the offices of the Ohio Ready Mixed Concrete Association (ORMCA) to discuss dates for promotional seminars and demonstrations of flowable fill mixtures containing coal fly ash in the Ohio region. The five dates in 1994 and the corresponding Ohio locations, to be confirmed, are June 22, 23, 29, 30 and July 6 in Akron, Marietta, Toledo, Dayton and Columbus, respectively. Five ACAA-member representatives from ACAA's Ohio Chapter also were at the planning meeting.

During 1993, ACAA participated in four regional educational seminars and demonstrations in Ohio to promote the use of flowable fill mixtures containing coal fly ash. Those seminars were arranged by ORMCA in Bowling Green, Cleveland, Cambridge and Cincinnati. A total of approximately 800 registrants were in attendance at the 1993 events. The audience for the events consists of state, city, county and local engineers; engineering consultants; ready mixed concrete suppliers; and contractors.

The 1993 events provided the attendees with information concerning flowable fill mixtures and applications as well as many of the benefits derived from the use of flowable fill mixtures containing fly ash. Compared to ordinary compacted soil, the benefits found with flowable fill include speedy installation without the need for most labor and equipment; complete filling of voids, including those with irregular shapes and small dimensions; self-leveling flow characteristics; elimination of settlement under traffic and other loads; and excavatability. The speedy installation was demonstrated by backfilling an open trench with flowable fill while an adjacent trench was backfilled with compacted soil layers using laborers equipped with shovels, rakes and tamping equipment. The excavatability was demonstrated by using a backhoe to excavate a third adjacent trench in which flowable fill had been placed twenty-eight days earlier.

Even though the events planned for 1994 will have a format and content that are essentially identical to those used for the 1993 seminars and demonstrations, additional information will be presented from lessons learned during 1993 concerning both the **quality and excavatability** of the installed product. One of the indirect benefits associated with the use of flowable fill mixtures is that the mixtures can be "precertified" for specific sets of ingredients and subsequently delivered without the need for extensive on-site sampling and testing. But it is essential to have a quality control program which assures that the correct mixture with the proper materials is delivered and placed as specified for each application. The major lesson learned during 1993 appears to be that without proper controls, the strength of the in-place flowable fill may be higher than wanted and the flowable fill may not be excavatable with certain tools and equipment.

A maximum strength of 100 psi is being specified in the Ohio region as a limit to assure excavatability, or digability as it is frequently termed. It has been found that the 100 psi "strength boundary" between digable and non-digable mixtures can easily be exceeded, and this could prove to be damaging to the flowable fill market if not properly controlled.

It should be recognized that there are numerous flowable fill mixtures described in the literature and specified for use that are not digable. In fact, depending upon mixture proportions and sources of materials, the range of strengths for the array of possible flowable fill mixtures can be thought of as more or less continuous--from 100 psi or less; through the strengths exhibited by lean concrete mixtures; and well into the region of strengths that are typical for normal and high-strength concrete.

The adage "buyer beware" is becoming "supplier beware" as counties and cities are specifying performance criteria which may impose liability on the supplier of flowable fill if it is determined that the flowable fill is not excavatable. ACAA's technical committee will review and discuss the topic of quality and excavatability of flowable fill mixtures at its next meeting on April 20, 1994 in Houston, Texas.

ASH UTILIZATION WORKSHOP IN MILWAUKEE

ACAA Participates with Member Companies

ACAA's Tom Blackstock, Director of Technical Services, represented ACAA at the University of Wisconsin's Center for Byproducts Utilization (CBU) in Milwaukee, WI on February 3, 1994. The CBU conducted an ash utilization workshop, led by ACAA member Dr. Tarun Naik. ACAA member companies included National Minerals/LaFarge Corporation, Wisconsin Electric Power Company, Tennessee Valley Authority, Duke Power Company and American Fly Ash Company. The speakers included ACAA's Tom Blackstock, James Hagle of National Minerals Corporation, Bruce Ramme and Timothy Nechvatal of Wisconsin Electric Power Company, and Dr. Naik.

CONCRETE AND AGGREGATES INDUSTRY

ACAA Exhibits at International Show

ACAA's Communications Coordinator Jill Hunger represented ACAA with an exhibit at the 1994 International Concrete and Aggregates Show held in Las Vegas, Nevada, February 6th through the 10th. This was also the meeting place for three related organizations to hold their annual conventions--the National Aggregates Association, the National Ready Mixed Concrete Association, and the National Stone Association. The show attracted thousands of individuals and hundreds of exhibitors. ACAA's exhibit was well attended with a steady flow of individuals stopping to obtain literature and samples of fly ash.

EXHIBIT WITH COUNTY ENGINEERS

ACAA Attends Annual Meeting

ACAA's Communications Coordinator Jill Hunger and Director of Technical Services Tom Blackstock represented ACAA at the 1994 National Association of County Engineers (NACE) Convention and Trade Show held in Reno, Nevada, February 27th through March 1st. The show attracted some 200 individuals representing county governments throughout the USA. Many individuals were interested in coal ash applications and expressed appreciation for ACAA's continuing support of NACE.

ACAA PROMOTES ASH USE IN INDIANA

Seminars Presented to Highway Audience

Sam Tyson, ACAA's Executive Director, and Tom Blackstock, ACAA's Director of Technical Services, represented ACAA at ash utilization seminars in Indianapolis, IN in January 1994 and in Evansville, IN in February 1994. The audience consisted of state and local highway department personnel and several representatives from electric utility and ash marketing companies. The speakers included Sam Tyson in Indianapolis and both Sam Tyson and Tom Blackstock in Evansville. Other speakers were Dave Ward of INDOT, Dave Jenkins of PSI Energy, Firooz Zandi of INDOT, Anthony DiGioia and Gary Brendel of GAI Consultants, Jeff Munger of Indianapolis Power and Light and Jerry Gick of John Cole, Inc. The focus was on high-volume highway construction applications, especially structural fill, using CCBs.

REMOVING BARRIERS TO CCB UTILIZATION

ACAA Recommends Amending CERCLA to Limit Liability

ACAA's position paper on the **Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)**, including recommendations about how CERCLA should be amended to limit liability with respect to the use of coal combustion byproducts (CCBs), was transmitted on February 8, 1994 to the Edison Electric Institute (EEI) for coordination within its legislative program activities.

Increased utilization of CCBs is inhibited by concerns about environmental liability under CERCLA which imposes liability regardless of fault. To encourage further utilization of CCBs, ACAA's position is that CERCLA should be amended to exempt utilized CCBs from its strict liability scheme. A CCB which has been beneficially reused should be excluded from CERCLA's definitions of "hazardous substance" and "pollutant or contaminant," and response action contractors utilizing CCBs should be exempted from CERCLA liability. CERCLA, which must be reauthorized in 1995, currently exempts other materials from liability.

ACAA's members are firm in their belief not only that the CERCLA barrier to increased utilization of CCBs in engineering, construction and waste remediation applications is an inappropriate consequence of this environmental law, but also that CCB utilization will increase significantly as a result of the removal of this barrier.

CLEAN WATER BILL AMENDMENT

ACAA Recommends Fly Ash Concrete Provision

The new federal funding associated with future construction of both sewage treatment and water storage, conveyance and treatment facilities is expected to be substantial. The use of coal fly ash as a mineral admixture in concrete that surely will be used in the construction of such facilities should be substantial as well. In January 1994, members of ACAA's government relations committee discussed the likelihood that unless legislative action is taken to insure that recipients of federal funds are indeed aware of the need to allow the use coal fly ash in concrete purchased with those funds, much if not most of the concrete will be purchased without proper consideration of this valuable mineral admixture.

Even though the federal guideline, Procurement Guideline for Cement and Concrete Containing Fly Ash [48 Federal Register 4230, January 28, 1983], was the first federal procurement guideline issued pursuant to RCRA Section 6002, ACAA's members have repeatedly encountered situations involving federally-funded projects in which coal fly ash for use in concrete is either not considered in the formative stages of the project when its appropriate use could be clearly stated, or worse, because of outdated specifications and/or lack of guidance, the use of coal fly ash in concrete is prohibited by engineers and project managers.

The costs of "policing" numerous construction programs nationwide are insurmountable for the coal ash industry. More importantly, pervasive failure to implement appropriate guidelines for use of coal fly ash in concrete in federally-funded projects runs counter to the letter and intent of RCRA, Executive Order No. 12873, and other environmentally sound federal procurement initiatives. A legislative approach is warranted to assure that coal fly ash receives appropriate consideration for use in concrete in the numerous sewage treatment and water storage, conveyance and treatment facilities nationwide that will be constructed because of federal funding in the new clean water and drinking water legislation.

In February 1994, ACAA prepared an explanation of the technical and marketing history which warrants the inclusion of language in new federal clean water legislation to support the use of coal fly ash in concrete. That information was transmitted to EEI for coordination within its legislative program activities.

ACAA WELCOMES NEW MEMBERS IN 1994

Membership in ACAA is available in each of several classes briefly described as follows: **Class U**--electric utility producers of CCBs; **Class N**--non-electric utility producers of CCBs; **Class IN**--international (non-USA) producers of CCBs; **Class M**--marketers of CCBs; **Class C**--coal companies and allied industry organizations; **Class O**--organizations with commercial, consulting, academic or research interests in CCBs; and **Class I**--individuals or employees of organizations not eligible for membership within other membership classes. ACAA also identifies individuals who have made significant technical contributions to the management and use of CCBs and awards honorary **Class H** memberships annually.

ACAA's members provide financial support and volunteer leadership for ACAA, the **only** national organization dedicated to the use of coal combustion byproducts (CCBs). ACAA's programs are devoted to developing, protecting and promoting the use of CCBs. Each member of ACAA shares an interest both in using CCBs as valuable engineering and manufacturing materials and in avoiding the cost of disposal. ACAA and its members lead in efforts that result in the use of more than 20 million tons of CCBs annually. ACAA and its members are united in promoting CCB uses that are technically sound, commercially competitive and environmentally safe.

ACAA welcomes the companies and individuals that have become members of ACAA in 1994. Their participation in every facet of ACAA's activities is encouraged. ACAA's new members in 1994 are--

Class H--

ALLAN W. BABCOCK
24 OUTLOOK ROAD
FAIRMONT WV 26554

CINCINNATI,
CRAIG J. CAIN
2325 FORESTVIEW ROAD
EVANSTON, IL 60201

Class M--

RAY DAVIS
BRETT ADMIXTURES
8850 WENTWORTH AVENUE, S.
BLOOMINGTON, MN 55420

Class O--

GERALD FISHER
TRI-STATE TRANSPORT, INC.
4321 EAST 60TH STREET
DAVENPORT IA 52807

Class U--

GARY GIBBS, MANAGER/ENVIRONMENT,
ENERGY & PLANNING
CENTRAL & SOUTH WEST SERVICES
P.O. BOX 660164
DALLAS, TX 75266-0164

JOHN H. HOFFMAN
SENIOR ENGINEER
CINCINNATI GAS & ELECTRIC COMPANY
139 E. FOURTH STREET., ROOM 552-A
CINCINNATI, OH 45202

TANDA FIOCCHI
ASH & ALTERNATE FUELS SPECIALIST
ILLINOIS POWER COMPANY
500 SOUTH 27TH STREET
DECATUR, IL 62525

THOMAS A. COFER
PRINCIPAL, BYPRODUCT RESOURCES
NORTHERN INDIANA PUBLIC SERVICE CO.
5265 HOHMAN AVENUE
HAMMOND, IN 46320

MEETING ANNOUNCEMENT

[Effective-4/01/94]

ACAA SOUTH-CENTRAL REGION ASH USE WORKSHOP & COMMITTEE MEETINGS

Embassy Suites, Hotel
9090 Southwest Parkway
Houston, Texas 77074
Hotel Reservations: 1.800.362.2779
Phone: 713.995.0123 / Fax: 713.779.0703

Meeting Dates: April 18-22, 1994

April 18 (Monday): Texas Coal Ash Utilization Group (TCAUG)
Membership Meeting/TCAUG Members Only (8:30 a.m. - 4:00 p.m.)
ACAA/TCAUG Welcome & Hospitality (5:30 p.m. - 7:30 p.m.)

April 19 (Tuesday): Ash Use Workshop on "National and Regional Perspectives on the
Use of Coal Combustion Byproducts (CCBs)--and CCB Applications in the South-
Central Region"

(9:00 a.m. - 5:00 p.m.)
Lunch (Noon - 1:30 p.m.) Provided by ACAA
Hospitality Reception (5:30 p.m. - 7:30 p.m.)

April 20 (Wednesday): Government Relations Committee (8:30 a.m. - 10:30 a.m.)
Communications & Marketing Committee (10:30 a.m. - 12:30 p.m.)

Lunch (12:30 - 2:00 p.m.) Provided by JTM Industries, Inc.
Technical Committee (2:00 p.m. - 4:00 p.m.)
Follow-up Task Force Meetings (4:00 p.m. - 5:00 p.m.)
Hospitality Reception (5:30 p.m. - 7:30 p.m.)

April 21 (Thursday): Administrative Committee (9:00 a.m. - 10:00 a.m.)
Steering Committee (10:15 - noon)

April 22 (Friday): Executive Committee Meeting (8:00 a.m. - noon)

COMMITTEE MEETINGS OPEN TO ALL ACAA MEMBERS; NON-MEMBERS BY INVITATION.

Registration: ACAA Members (included in Membership dues); Non-Members \$195.00; Students & Government Employees \$0.00; Members of TCAUG \$0.00.

Hotel Room Rate: \$99.00+tax/single or double

Transportation: 20 miles South West of Hobby Airport, 12 miles to downtown.

*For special access and accommodation requirements, please contact Sandra Nowak at (202) 659-2303.