ASH AT WORK

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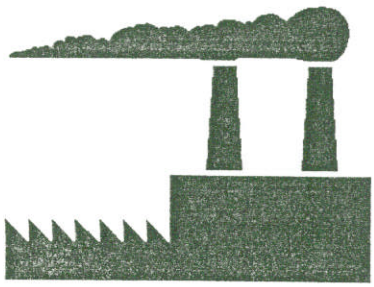

ASH AT WORK is the voice of American Coal Ash Association

Samuel S. Tyson, P.E.
Executive Director

ACAA RECEIVES LETTER OF APPRECIATION FROM EDISON ELECTRIC INSTITUTE (EEI)

ACAA's Chairman Gary Jablonski of American Electric Power received a letter of appreciation in June 1993 from EEI's President Thomas R. Kuhn. The text of the letter follows:

> "I am writing to express our satisfaction with the improved communication and cooperation between the Edison Electric Institute and the American Coal Ash Association (ACAA).
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> "We appreciate your efforts, and those of Jim Lingle of Wisconsin Electric Power Company, Chairman of the ACAA Government Relations Committee, and Sam Tyson, ACAA Executive Director, in facilitating member company participation and improving coordination among ACAA, EEI and the Utility Solid Waste Activities Group. I understand from Jim Roewer and John Novak that we have established excellent communication among our organizations and that tremendous progress has been made in addressing a number of concerns regarding ACAA activities, procedures and coordination with EEI.
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> "We recognize the increasing importance of coal combustion byproduct utilization to the electric utility industry, and look forward to continuing to work with ACAA in support of efforts to promote the beneficial use of coal ash."

ACAA members and staff look forward to many productive activities coordinated with both EEI and the Utility Solid Waste Activities Group in 1993 and beyond.

ACAA WORKS WITH CONCRETE INDUSTRY TO PROMOTE FLOWABLE FILL

ACAA's Executive Director Sam Tyson participated as the guest speaker in a series of three recent seminars and demonstrations promoting flowable fill mixes containing coal fly ash. Each seminar was conducted in a classroom setting followed by an on-site placement of flowable delivered by a ready mixed truck. The flowable fill was placed in a trench alongside an identical trench which was backfilled with soil layers involving typical labor and compaction equipment. Attendees received a dramatic lesson in some of the clear advantages of using flowable fill--reduced project time, improved safety, and elimination of labor and compaction equipment requirements.

The three locations for the promotional seminars and demonstrations were Bowling Green, Cleveland and Cambridge, OH. The combined attendance at the three locations was 550, with most registrants coming from local, county and city engineering departments, along with contractors and consulting engineers. The site selections and the promotional mailings, plus other costs for the seminars and demonstrations were arranged by the primary sponsor, the Ohio Ready Mixed Concrete Association (ORMCA). A video on flowable fills is being prepared by ORMCA and will include some information on coal fly ash supplied by ACAA.

ACAA PARTICIPATES IN TECHNICAL MEETINGS TO PROMOTE COAL ASH RESEARCH

ACAA's Executive Director Sam Tyson had the opportunity in late May 1993 not only to address a regional meeting of ACAA-member companies and others interested in coal ash research, but also to interact with several **non-member electric utilities with an interest in ACAA membership**. The meeting was organized by an ACAA member, the **Energy and Environmental Research Center, University of ND**, and was hosted in the offices of ACAA member, **Andy Stewart** of **Cooperative Power** in Eden Prairie, MN.

The EERC is one of the world's major coal research facilities. Since its founding in 1951, the EERC has conducted research, testing, and evaluation of coals and associated combustion and gasification technologies. The Center's transfer from the U.S. Department of Energy to the University of North Dakota in 1983 made it possible for the Center's staff to work directly for industry to provide the needed data and practical solutions required for the specific problems and challenges encountered. The EERC possesses state-of-the-art analytical equipment and extensive laboratory and pilot-scale facilities, providing unique capabilities for research programs.

The EERC focuses on ash utilization through a research group called Coal Ash Resources Research Consortium (CARRC, pronounced "cars"). CARRC works with utilities and ash marketers to advance as utilization markets by performing research on the properties and

behavior of coal ash in various current and potential use applications. This research effort will focus on production of consistent, high-quality coal ash that is utilizable in those applications, while reducing ash-related operational problems. The proposed approach is to develop an understanding of the impact of utility operational parameters on the ash (product) properties.

The primary objective of CARRC is to work with industry and government to solve ash-related problems and promote and advance the environmentally safe, economic utilization of coal ash resources. Secondary objectives include generation of scientific and engineering information to direct regulations and to develop and evaluate specifications of coal ash, development of improved characterization methods for coal by-products, demonstration of new or improved coal ash use applications, and technology transfer.

ACAA INTERACTS WITH DC-BASED CIVIL ENGINEERING RESEARCH FOUNDATION

ACAA's Executive Director Sam Tyson recently developed a working relationship with the Civil Engineering Research Foundation (CERF). CERF is affiliated with the American Society of Civil Engineers (ASCE). Many of ACAA's member-company representatives are design, materials and structural engineers and members of ASCE. CERF's mission addresses one of the civil engineering industry's greatest challenges: **finding ways to move research results and innovation more rapidly into practice.** CERF's new Highway Innovative Technology Evaluation Center (HITEC) addresses this challenge by serving to evaluate innovative technologies and expedite their transfer into practice.

HITEC is structured to use a "consensus-based approach" and "pooled funding mechanisms" to overcome the barriers imposed by obsolete standards and the threat of tort liability. Significant reductions in the considerable time required for the present agency-by-agency evaluation process are expected, along with dramatic cost savings for the product owner due to reduced evaluation time. Government agencies will also save money because HITEC's evaluation will provide an impartial, credible baseline evaluation, which then can be used as a basis for further evaluations.

HITEC was created under a $3 million cooperative agreement with the Federal Highway Administration (FHWA), although it is projected to become self-supporting through application fees, evaluations, subscriptions, publications, etc. Other Innovative Technology Evaluation Centers (ITECs) are planned by CERF, including an Environmental ITEC (EITEC) and a Building ITEC (BITEC).

ACAA PLANS WORKSHOP AND OPEN FORUM AT SUMMER MEETING IN KANSAS CITY

ACAA will hold a workshop on **"Research and Development Opportunities for Coal Ash Producers, Suppliers and Users"** on **Tuesday, July 20, 1993**, in **Kansas City, MO**. The workshop will be the opening day activity at ACAA's Midwestern Region Ash Use Workshop and Summer Meeting to be held at the Embassy Suites Hotel, 220 West 43rd Street, Kansas City, MO; Phone: 816-756-1720; FAX: 816-756-3260.

The overall meeting dates and activities are as follows--

July 19 (Monday):	**Welcome & Hospitality** (5:30 - 7:30 p.m.)
July 20 (Tuesday):	**Ash Use Workshop--Research & Development Opportunities for Coal Ash Producers, Suppliers and Users** (8:30 a.m. - 5:00 p.m.)
July 21 (Wednesday):	**Communications & Marketing Committee** (9:00 a.m. - 12:00 noon) **Technical Committee** (1:30 p.m. - 2:00 p.m.) **Government Relations Committee** (1:30 p.m. - 2:00 p.m.) **OPEN FORUM--DOE's Coal Ash Use Barriers Study** (2:00 p.m. - 5:00 p.m.)
July 22 (Thursday):	**Administrative Committee** (9:00 a.m. - 11:00 a.m.) **Steering Committee** (11:00 a.m. - 12:30 p.m.) **Open Golf Tournament** (2:30 p.m.)
July 23 (Friday):	**Board of Directors** (9:00 a.m. - 11:00 a.m.)

ACAA ATTENDS MEETING SPONSORED BY COAL INDUSTRY GROUP

Executive Director Sam Tyson recently attended a meeting of the Washington Coal Club at which the guest speaker was Jackie Bird, director of the Ohio Coal Development Office (OCDO). OCDO co-supports the development and commercialization of technologies that can use high-sulfur Ohio coal in an economic, environmentally sound manner.

Jackie and her staff are responsible for the oversight of Ohio's clean coal technologies development program, one of the largest clean coal technology programs in the USA. OCDO was created in 1984 to scientifically address the environmental problems associated with Ohio's coal. In 1985, Ohio voters overwhelmingly passed a constitutional referendum endowing OCDO with $100 million in bond financing to co-fund clean coal research and development projects.

Jackie discussed a 35 MW SNOX Demonstration Project located at Ohio Edison Company's Niles Plant. The SNOX project is an advanced catalytic process that is designed to remove greater than 95% of the sulfur dioxide and 90% of the nitrogen oxides from power plant flue gases. The process uses no sorbents and forms no waste products, the sulfur dioxide being converted to concentrated sulfuric acid which can be sold.

OCDO is providing $7.9 million toward the $31.4 million cost of the demonstration program, which is part of the U.S. Department of Energy's Clean Coal Technology Program. Other cosponsors and founders of the project are ABB Environmental Systems, Snamprogetti S.p.A. of Italy and its affiliate Haldor Topsoe of Denmark, developer of the SNOX technology, and **ACAA member, Ohio Edison Company.**

At the Niles Plant, the SNOX process has been designed to treat one-third of the flue gas from the 108 MW Unit No. 2 boiler. First, particulate is collected from the flue gas, then nitrogen oxides are removed by selective catalytic reduction (SCR) with ammonia and converted to nitrogen and water vapor. Subsequently, the SO_2 is oxidized to SO_3 in a catalyst vessel and condensed from the flue gas downstream in an air-cooled condenser.

An important feature of the process is its ability to recover additional heat from the flue gas and increase the efficiency of the boiler by employing the hot air discharge from the acid condenser as combustion air to the boiler. For typical sulfur coals and NO_x levels, 3-4% additional thermal energy can be recovered.

Initial operation of the plant began in March of 1992 and the formal demonstration program will continue until the end of 1993. The primary objectives of the project include:

- Demonstrating NO_x and SO_2 removals of 90 and 95% respectively.
- Demonstrating the commercial quality of the product sulfuric acid.
- Performing a technical and economic characterization of the process.

RECENT TECHNICAL PUBLICATIONS CONCERNING COAL ASH

ACAA has obtained a copy of the recent report, **Scrubber Byproducts Generated U.S. Electric Utilities** (Industrial Information Services, Reno, NV, March 1993). The report was designed to provide a quantitative evaluation of scrubber byproducts at the present time, as well as make some projections with regard to scrubber byproduct generation in the year 2000. A summary from the report follows:

> "Key input for the report has been the results of a survey of electric utilities in the United States undertaken by Industrial Information Services between September 1992, and February 1993. With one exception, all utilities with one or more scrubbers at the present time responded to the survey. Inputs were also obtained from utilities planning to begin scrubber operations between now and the year 2000.
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> "In 1992 it is estimated that 23.8 million tons of scrubber by-products were generated by electric utilities in the United States. Wet limestone scrubbers are used more frequently by utilities in this country than any other types of scrubber. In 1992 wet limestone systems were used to scrub 34,167.5 MW out of a national total of 66,414.5 MW scrubbed. Wet lime systems scrubbed another 16,759 MW, and spray-dry scrubbers using a lime sorbent are presently the third most popular type of system, scrubbing 5,534 MW. Between the, wet limestone and wet lime scrubbers generate seven-eighths of all waste produced by utility scrubbers.
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> "In 1992 more scrubber waste (23 percent of the total) was produced in the Southwest Region (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas) than in any other region of the United States. The next largest scrubber waste generators at this time are the Midwest (Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin), the South Atlantic Region (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee), the Mid-Atlantic Region (Delaware, Maryland, Pennsylvania, Virginia, and West Virginia), and the Central Region (Iowa, Kansas, Missouri, and Nebraska)."

A recent report from IEA Coal Research was **Applications for Coal-Use Residues** (IEACR/50, November 1992, by Lee B. Clarke). This report "provides basic information on over two hundred different applications and processes which utilize coal-use residues, from more than twenty countries. Applications range from high-volume, low-technology uses, to low-volume, but highly specialized applications. Commercial processes and applications are listed together with those which are at an experimental or developmental stage, in work carried out by private or governmental research organizations. Process and manufacturing descriptions are given for each application, and data are provided on the types of coal-use residues utilized, other materials incorporated, and properties of manufactured products." This excerpt is taken from the abstract of the previously mentioned IEA Coal Research report.

Another report, currently in draft form, concerning coal ash will be published by IEA Coal Research later in 1993. The report will review the source and characteristics of flue gas desulfurization (FGD) systems and assess current developments in the management of these materials.

IEA Coal Research is an organization set up in 1975 under the auspices of the International Energy Agency (IEA) which was itself founded in 1974 by member countries of the Organization for Economic Co-operation and Development (OECD). The purpose of the IEA is to explore means by which countries interested in minimizing their dependence on imported oil can cooperate at a technical level. IEA Coal Research began in 1975 and is currently supported by fourteen countries including: Australia, Austria, Belgium, Canada, Denmark, Finland, Germany, Italy, Japan, the Netherlands, Spain, Sweden, the United Kingdom, the United States of America; and the Commission of the European Communities. IEA Coal Research gathers information and makes assessments on all aspects of coal-related technology from supply and transport, through markets and end-use technologies, to environmental issues and waste utilization.

ACAA SERVES ON ADVISORY BOARD FOR PITTSBURGH COAL CONFERENCE

The University of Pittsburgh, along with the Advisory Board and Participating Organizations, announces that the Tenth Annual International Pittsburgh Coal Conference will be held on September 20-24, 1993 at the Pittsburgh Green Tree Marriott, Pittsburgh, PA, USA. ACAA's Executive Director Sam Tyson serves on the Advisory Board which met in Pittsburgh most recently on June 4, 1993.

The Pittsburgh Coal Conference is recognized as one of the leading coal technology conferences in the United States. The Conference is designed to present an overall update on coal processing and utilization in the U.S. and abroad. The program attracts a wide-range audience from both domestic and international coal-energy communities with representatives from the utility sector, industrial users, government agencies, professional associations, research institutes and academia. The twenty sessions planned for the three-day conference will include **three sessions on coal ash use**: "Ash Use Interactions in Soils and Plants"; "Ash Use in Mine Reclamation"; and "Environmental/Regulatory Issues Related to Ash Use in Mine Reclamation" (co-chaired by ACAA's Sam Tyson).

ACAA PRESENTS PAPER AT AIR & WASTE MANAGEMENT CONFERENCE

ACAA's Executive Director presented a paper, **"Overview of Coal Ash Use in the USA: Pollution Prevention for the 21st Century,"** during the 86th Annual Meeting of the Air & Waste Management Association, on June 15, 1993 in Denver, CO. The paper was published in the proceedings of the conference which attracted several thousand attendees.

ACAA STAFF--EDUCATION UPDATE

ACAA staff member **Sandra Nowak, Manager of Finance and Administration** recently attended a four-day certification program in **Conference Management** sponsored by the American Society of Association Executives (ASAE). The certification program was held at the Raddison Hotel located in Alexandria, VA June 14 to June 17, 1993. The program was attended by some 92 participants from all over the USA. The topics covered were: Managing Logistics for a Smooth Convention, Effective Techniques for Food and Beverage Management, Effective Techniques for Budget Management, Managing Education for a Smooth Convention, Skills for Site Selection & Contract Negotiation and Effectively Using Direct Marketing. This certification program provided many useful tools for ACAA's quarterly workshops and meetings as well as ACAA's international symposium. Additionally it allowed Sandra to gain valuable information from direct interaction with other association managers.

ACAA staff member **Helen Tesfaye, Manager of Membership Services** recently attended a computer software class in Rockville, MD to become proficient in the use of **MeetingPro II**, a software package that processes information needed for the management of registrants at meetings. She attended the three-day course of individualized instruction with eight other highly motivated students. The software has features which file registrant data; create customized confirmation letters with meeting information; print registrant lists; provide updated reports of registrant payment status; create mailing labels; print name badges; and print other useful forms and data reports concerning registrants. The software will be particularly useful for large meetings such as **ACAA's 1995 International Symposium**.

ACAA ADDS NEW STAFF MEMBER--COMMUNICATIONS ASSISTANT

ACAA's newest staff member is **Jill Hunger, Communications Assistant**. A graduate of the University of Virginia (UVA) with a bachelors degree in **environmental sciences**, she specialized in environmental planning. She has worked in UVA's Environmental Sciences computer library and in the planning office of Lower Makefield Township in her hometown of Yardley, PA. At ACAA her responsibilities will include planning, development and dissemination of information related to coal ash use, including publications, slide files and planned videos; ACAA's annual survey and report of coal ash production and use; ACAA's international symposium; and information for ACAA's various educational and promotional activities. Jill will assist Executive Director Sam Tyson in keeping ACAA's members and related industry groups and the public informed of ACAA's activities through newsletters, memoranda and press releases. Her first assignment will be to coordinate the timely production and dissemination of a **brochure** summarizing ACAA's history and members, its organizational and committee structure, publications and meetings. The brochure, also designed to create an awareness of ACAA in support of membership recruitment, will be widely distributed.

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Contact ACAA's staff for more information.