

Ash At Work

ACAA February 1997

American Coal Ash Association

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ACAA's 12th International Symposium a Success - Attendance Sets Records

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Orlando, Florida - ACAA's Twelfth International Symposium on Management and Use of Coal Combustion Byproducts (CCBs) was held in Orlando Florida. January 26-30, 1997. The symposium was tremendously successful, with the total number of registered participants reaching almost five hundred (500)--the highest number to ever attend an ACAA International Symposium. Participation from international attendees also broke previous records. Nineteen countries, represented by a total of 87 international participants joined US delegates to exchange technical information and ideas about the coal combustion byproduct industry.

The following countries were represented by attendees in Orlando: Australia, Belgium, Canada, China, Denmark, England, Finland, Germany, Israel, Japan, Korea, the Netherlands, Poland, Portugal, Russia, South Africa, Spain, Switzerland, Taiwan and the United States.

This year's theme, Innovation for a Sustainable Future was outlined by ACAA's Executive Director Sam Tyson as he gave the welcome and opening remarks at the plenary session, held Sunday, January 26. Mr. Tyson's speech,

entitled Building the Bridge to the 21st Century, highlighted the goals of the symposium, supporting ACAA's mission "to advance the management and use of CCBs in ways that are technically sound, commercially competitive and environmentally safe". The plenary session began with a procession of flags representing all nations with participants as a symbol of the international cooperation of the event. The Keynote Address. entitled Convergence - A New Direction, was presented by David Hauser, V.P., Procurement Services and Materials of Duke Power Company

Twenty-one technical sessions were held throughout the week with information presented from 114 technical papers. The sessions ran smoothly and efficiently, clearly due to advance preparation by each speaker as well as the efforts of volunteer session moderators. The symposium proceedings were compiled by ACAA and comprised more than 1400 pages. The papers were published in three bound volumes. Volumes one and two of the proceedings were published through the cooperative efforts of Electric Power Research Institute and all three volumes were presented to participants during on-site registration. (see Symposium p. 8)

Corner

Commentary by: Sam Tyson ACAA Executive Director

Tyson's

It's Finally Time for Prime Time!

You may have seen the 4-minute news spot, recently aired on national television, that reviewed some of the current federal/state efforts to create "high performance concrete" to extend the life of concrete in bridges. The segment showed viewers what we have known all along; that the virtues of coal combustion byproducs will be recognized because the projects are successful.

The use of COAL FLY ASH in combination with portland cement and silica fume (20%, 74% and 6%, respectively) to produce durable concrete is being evaluated in eleven states; and the work being performed in New York was featured in a video documentary titled "America's Highways" on ABC-TV's World News Tonight, in a regular segment, Solutions, hosted by Peter Jennings at 6:30 p.m. (EST), February 11, 1997.

Clearly, this segment was seen by millions of viewers; and the message was clear and positive with respect to the role of fly ash in producing economical and durable concrete--fly ash is a valuable component in high-quality concrete that should be used to build a long-lasting infrastructure at a competitive cost.

The news story focused on the efforts in New York State, but other important and newsworthy work is being done elsewhere. The Departments of Transportation in both Iowa and Virginia have been working on "high performance concrete" projects designed to extend the life of concrete in roads and it appears that reports summarizing these efforts will receive well-deserved national recognition similar to that received by their colleagues in New York.

ACAA has obtained a copy of this ABC news segment and is in the process of mailing copies to all ACAA members and other interested parties in the CCB industry, university libraries, trade associations, and key contacts in all state DOT offices. Look forward to more "prime time" exposure for the CCB industry in the months to come.

Until next time.

New ACAA Book Coal Combustion Byproducts (CCBs) - Innovation for a Sustainable Future is now in Production

Production has begun on ACAA's CCB Book, a table-top book packed with photographs and information about the CCB industry. The book, entitled Coal Combustion Byproducts (CCBs) - Innovation for a Sustainable Future, will replace the 1986 "Black Book" and will feature photographs and information contributed by ACAA members. A task force. chaired by Howard Fitzgerald of Reuse Technology, has worked with the Communications and Marketing Committee and ACAA staff to get the project started and will help see it through to completion. Following an enthusiastic approval in ACAA's quarterly meeting in Reno, Nevada in October of 1996, the production of the book was put into fullswing.

A meeting was held December 13, 1996, at ACAA's offices to discuss the basic format of the book. Attendees of this meeting included; task force Chairman Fitzgerald; task force members Tracy Wandell of Sphere Services and Cyrus Roher of Potomac Electric Power Company, ACAA staff, and the graphic designer and printer for the project. The printer was selected by ACAA for their outstanding work on the FHWA Fly Ash Facts for Highway Engineers publication. The designer chosen has worked closely with the printer on many projects in the past.

At the meeting, the task force and staff discussed the basic ideas that need to be communicated by the book to the printer and designer, along with the general size and shape specifications. The hard-bound book will be 9 1/2 inches by 12 inches with the long size being the horizontal edge. The cover will be cloth with foil stamped title and a full-color "dust cover" will also be created. The book will be approximately 88 pages in length and will be broken down into two major sections. The first section will be filled with photographs of CCB applications and brief text accompaniment. The second section (12-16 pages) will be a technical section.

Currently, the technical section is under final review and should be ready to be sent to the designer shortly. The photographs have been collected from ACAA sources. plus member contributions and cover a wide range of topics. For their use in this publication. the photographs must be scanned into an electronic format and then resized and touched up to fit the designer's format. Currently, over 140 photographs are available to the graphic designer, complete with captions and instructions for their use.

Many of these photographs will have a second use after their inclusion in the CCB book.

Once the images are scanned, they can be printed to a form that will be used to enhance ACAA's display (see ACAA Display Photos on p. 4). The new set of photographs will be laminated for their protection and should last a long time.

The cost of the book will be \$35 for members and \$75 for nonmembers. Pre-production discounts were offered to attendees at the 12th International Symposium.

Member News Reuse Technology

Reuse Technology, Inc. Of Kennesaw, Georgia, recently hired Tom Blackstock, PE as a project manager in New Technology Development. Blackstock is the former Director of Technical Services at the American Coal Ash Association. Blackstock is currently leading a research and development effort focused on stripping ammonia from ash treated to improve ESP performance.

Although Blackstock is no longer on ACAA staff, he will continue to contribute to ACAA as the Vice Chairman of ACAA's Technical Committee. He was also recently named Chairman of the American Society of Civil Engineers Coal Combustion Byproducts Subcommittee.

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ACAA has a New Address, but We Haven't Moved! ACAA's Internet Home Page is up and Running Well

What is ACAA's address? The natural reply would be Eisenhower Avenue in Alexandria. VA. But ACAA has a new address, http://www.ACAA-USA.org. The Internet is a reality in business today and ACAA has taken a large step towards the 21st century by adding ACAA's Home Page to the World Wide Web. The "Net", "World Wide Web", "Information Superhighway", "Search Engines"; these and so many other terms that are new for so many people are quickly becoming key buzz-words in every industry these days.

Our presence on the internet give ACAA a chance to reach people from all around the world 24 hours a day, 7 days a week. By typing in our address or looking for ACAA in one of the many search engines, someone interested in coal combustion byproducts can be sent, via the internet, to ACAA's home page. Once there, the web "surfer" can wander through the many pages of information to find out more about ACAA.

More Internet Stories: See Page 10!

Internet Q and A

Link your Page to ACAA's Home Page!

Duke Power Internet/Intranet

Information about upcoming meetings, publications or general information can be researched. Interested viewers can even download a membership application or send e-mail directly to ACAA's

offices. So far, reactions to the home page have been positive and staff has begun to receive some e-mail and information requests directly from this new source. As our exposure increases, the amount of information that can be made available through the internet will grow as will the amount of e-mail sent to ACAA.

Future plans for the home page will be determined by the success of what has already been put on-line. In the near future, meeting registration forms (that can be downloaded now) will be able to be filled out and returned directly on-line. Also, ACAA is working on special "members only" posting of information. The technology is available now and the future of ACAA's home page has so many exciting possibilities.

ACAA to Display New Photos Making Each Trade Show Picture Perfect

ACAA's trade show display will take on a new look in 1997. To be more precise, ACAA's trade show display will take on a variety of new looks for 1997. As a result of the photographic scanning needed to create ACAA's CCB Book, ACAA has an opportunity to create high quality photographic images for use at trade shows. Once the photographs are scanned in to the electronic format, they are reproduced in two ways. For the CCB Book, they are used to creating the printer's "negatives". They are also being enlarged and laminated for use with ACAA's display.

ACAA's current display photographs are beginning to show the wear of years of handling and shipping across the country and around the world. The new style photographs will be lightweight and durable. Another advantage of combining the efforts of these two projects is the selection of photographs available. Over 140 photographs were gathered for the CCB Book and each is available for use in the ACAA display.

Once the scanning process is complete, photographs will be selected to represent all of the aspects of CCB use. As staff members prepare for each trade show, photographs specifically geared towards that show can be added to the standard photographs that are commonly carried.

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American Electric Power Moves Forward on Acid Mine Drainage Abatement Program with the State of Ohio

Ohio Lieutenant Governor Nancy P. Hollister today announced that American Electric Power and the State of Ohio will, for the first time, use a coal combustion byproduct to seal a long-abandoned coal mine and block acid mine drainage, helping to protect the environment. Ohio State Development Director Donald E. Jakeway gave final approval to the Ohio Coal Development Office's (OCDO) clean coal technology agreement on Nov. 15, 1996.

The \$2.35 million, two-year field project is funded by a broad coalition of public, private and academic partners. OCDO is contributing up to \$1.17 million. AEP, the Ohio Department of Natural Resources Mines and Reclamation Division, the U.S. Department of Energy, the U.S. Department of Interior's Office of Surface Mining, Dravo Lime Co., and The Ohio State University will share the remaining costs. Additionally, Ohio EPA will be asked to join in the review of the project as it progresses.

"This cooperative effort to not only recycle a coal combustion byproduct, but also to use it to improve the environment, is highly innovative," Lt. Governor Hollister said. "I am pleased the Ohio Department of Developments Coal Development Office has joined with other public and private entities to implement this study, which has the potential for long-term, positive impact upon Ohio's environment and economy."

"If the project is successful, the Ohio Department of Natural Resources will use this technology to mitigate acid mine drainage in Ohio," said Shan Mafi, a civil engineer with AEP's Civil and Mining Engineering Division. "This is pioneering work for AEP, but the company has already been a pioneer in coal combustion byproducts."

ACAA will participate in this project by having ACAA's Director of Technical Services, Barry Stewart, serve on the project Advisory Committee. This committee will be composed of representatives of the projects participants as well as the Ohio EPA, and the Muskingum Watershed Conservation District.

The byproduct to be used for this project is fixated flue gas desulfurization (FGD) material. The fixated FGD material is created when scrubber equipment installed to remove sulfur dioxide from power plant exhaust gases generates a solid byproduct, which is then mixed with fly ash and lime for stabilization. The fixated FGD material has low permeability and will be placed in specific mine openings to seal the mine. The mine will become flooded, preventing further contact of air and coal remains and preventing oxidation of pyrites (an iron sulfide mineral), which are the chief cause of acid mine drainage.

ACAA Names Dr. Stewart Director of Technical Services

ACAA has named Barry R. Stewart, Ph.D. Director of Technical Services. He joined ACAA in September of 1996, replacing Tom Blackstock. Stewart earned a B.S. in Plant Science from the University of Wisconsin-River Falls in 1986. In 1990, he received a M.S. in Crop and Soil Environmental Sciences (CSES) from Virginia Polytechnic Institute and State University (Virginia Tech). His thesis topic was the characterization of coarse coal refuse from Southwest Virginia. He continued his education in the CSES department and completed his Ph. D. in 1996. His dissertation was entitled "The Influence of Fly Ash Additions on Acid Mine Drainage Production from Coarse Coal Refuse". While at Virginia Tech he was also an instructor and laboratory coordinator in the undergraduate soils program and served as a teaching assistant in numerous other courses.

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Office of Surface Mining Meeting at Southern Illinois University Holds CCB Forum - ACAA's Dr. Stewart Presents Two Papers

ACAA's Barry Stewart,
Director of Technical Services,
presented two papers at Coal
Combustion Byproducts
Associated with Coal Mining
Interactive Forum. This
unique forum was organized
by the U. S. Office of Surface
Mining Reclamation and
Enforcement, and was held on
the campus of Southern Illinois
University, Carbondale, IL,
Oct. 29 - 31, 1996.

Stewart's first paper was entitled Potential Use of Coal Combustion Byproducts in the Eastern Coal Region: Site Characteristics. This paper outlined some of the conditions which exist in the Eastern Coal Mining Region and ways which CCBs could be used to improve reclamation. The second paper, Leachate Quality from Coarse Coal Refuse Mixed with Coal Fly Ash: Effects of Ash Blending Rates was Coauthored by ACAA member Dr. W. Lee Daniels of Virginia Tech. This paper reports experimental results from some of Dr. Stewart's dissertation research

This forum was unique in that it brought together participants from a broad range of interests. Federal and State regulators, the coal and CCB industries, environmental consultants, academics, and environmental activists all participated in the forum.

Each presentation was followed by a five minute question and answer period, and each session of 3 presentations was followed by 20 to 30 minutes of questions. This format gave all participants a chance to ask questions and comment on the presentations.

The presentations, plus transcripts of the question and answer sessions will be published soon. A copy of the

list of presentations is available to any ACAA member wishing to obtain copies of the papers. The forum was attended by over 170 people. Other ACAA member organizations which presented papers were Western Research Institute, EERC, GAI Consultants, Freeman United Coal Co., VFL Technology Corp., American Electric Power, and Dr. Dale Baker. Several other ACAA members also attended the forum

ACAA Membership Recruitment - Ask me!

Asking for information is quite common in Orlando, as tourists and conference attendees try to get to where they need to go. During ACAA's January 1997 symposium in Orlando, ACAA members also had an opportunity to answer important questions to symposium attendees...about ACAA that is.

While some visitors to Orlando were searching for tourist information, many symposium attendees were trying to find out more about ACAA. Many ACAA members wore a button with ACAA's logo bearing the words: Ask Me! The idea, put forward by the Executive Committee in October, 1996 was that each member should be willing to discuss the benefits of membership with potential new members during the symposium. There is no better way to promote ACAA membership than through current members.

Copies of the summary of benefits were also available in Orlando at ACAA's exhibit throughout the symposium along with copies of membership application forms, with details about each membership class along with their applicable dues. So, even if ACAA members were not sure how to direct someone to Disney World, they still were able to provide important information to potential members. ACAA's current membership drive runs through March 31, 1997, and offers a 50% reduction of first-year dues to new members.

University of Wisconsin Milwaukee Center for By-Product Utilization Holds Successful Technology Transfer Workshop

The Center for By-Product Utilization (CBU) at the University of Wisconsin-Milwaukee has held a series of workshops since 1988 on coal ash use. A recent workshop on Coal Combustion Byproducts Utilization was held on October 17, 1996 at the Milwaukee River Hilton Inn, Milwaukee. This tenth annual coal ash workshop was well attended by representatives from the utility industry, governmental agencies. consultants, contractors, and ready mix concrete suppliers. Attendance at these CBU workshops has ranged from 30 to over 100 participants and includes local, regional, national, and international representation. The October 1996 workshop speakers included ACAA's Executive Director Sam Tyson and other ACAA members. The speakers made presentations on a wide range of subjects dealing with utilization of fly ash, bottom ash, clean-coal ash, to name a few. Included in the program were papers on research. practical applications and marketing issues.

The one day program included a presentation by John H. Tews, Project Manager, Wisconsin Electric Power Company, on the technical and economic success, as well as the environmental necessity of recycling coal combustion byproducts. Dr. Tarun R. Naik, Director of CBU made a presentation dealing with the use of Class F, Class C, Class N, and clean-coal ash in

cement based materials for various types of construction, including buildings, pavements, prestressed concrete, and cast-concrete products. He also presented research and field data on freezing and thawing durability, scaling, and chloride permeability of fly ash concrete.

Bruce W. Ramme, Manager of Coal Combustion By-Products Utilization at Wisconsin Electric Power Company, presented information on flowable slurry made with fly ash, including production facilities and the wide range of applications in the Milwaukee area. Dennis Brush, of the Wisconsin Concrete Paving Association. discussed the successful use of fly ash in concrete pavements and its competitive advantage. Jim Prendergast of the National Minerals Corporation, St. Paul, Minnesota, discussed

availability and quality assurance of coal ashes. Sam Tyson, Executive Director of ACAA presented a detailed and very informative discussion about the history and future development of coal ash in concrete and other CCB utilization opportunities.

The workshop was an excellent example of technology transfer with up-to-date information. A workshop entitled: Use of Fly Ash and Other Coal Combustion ByProducts in Concrete Products and Soil Stabilization was held on December 6th, 1996, in Bloomington, MN. For more information about upcoming events, contact Henry Kolbeck or Tarun Naik (Phone: 414-229-4105, Fax: 414-229-6958 or E-Mail:

< tarun@csd.uwm.edu >).

ACAA Partial Publication Price List

ACAA Mem	bers (1st Copy)	Non-members
Expanded Survey	nc	\$195.00
State Regulations	nc	\$195.00
Membership Directory	nc	\$1,100.00
Publications List	nc	\$25.00
Symposium Proceedings 1997	nc	\$650.00
Symposium Proceedings (past)	nc	\$95.00
Videos	nc	\$35.00
Slide Sets	nc	\$240.00
Liability Issues White Paper	nc	NA
Fly Ash Cubes	nc	\$10.00

Fly Ash Facts for Highway Engineers

Cartons (135 per carton) - Members - \$492.00; Non-members - \$965.00 Individual - Members - \$5 per copy; Non-members - \$9.50 per copy.

For a free full Publications List or Complete Symposium Table of Contents List, contact ACAA staff.

Manual for Soil and Base Stabilization with Self Cementing Ash to Begin

At ACAA's October 1996 meeting in Reno, NV a task force was formed to address the use of Class C fly ash in base stabilization. A publication dedicated to Class C ash is needed because some contractors were using recommendations from ACAA's Flexible Pavement Manual for Class F use in base stabilization unsuccessfully on projects with Class C ash.

Mr. Glen Ferguson of
Geosystems Engineering Inc.
in Lexena, KS submitted a
proposal for the development of
"Manual on Soil and Pavement
Base Stabilization with SelfCementing Coal Fly Ash". This
proposal was reviewed by the
task force.

On December 16, 1996 task force members Fred Gustin (chair), Tex Leber and Oscar Manz, along with ACAA staff Sam Tyson and Barry Stewart, met with Mr. Ferguson via conference call to discuss the comments. Minor changes were made to the proposal and the task force recommended that Mr. Ferguson develop the manual. Mr. Ferguson plans to have a draft of the manual completed in March with expected completion of a final draft by the middle of 1997.

'97 Symposium Breaks Record

(continued from page 1)

Each volume contains a table of contents which lists paper topics and speakers; and the third volume contains a comprehensive table of contents for all three volumes, as well as appendices that cross-reference each paper with alphabetical listings of all authors and the organizations with which they are affiliated.

Attendees of the symposium were also able to visit the exhibit hall throughout most of the week. The hall was opened with a "Superbowl Kick-off" reception on Sunday and remained opened during session breaks and for lunches through Tuesday afternoon. Fifteen exhibitors reserved booth space in the spacious main hall where they received a steady flow of interested visitors.

A Reception and Awards banquet was held on Tuesday evening. The banquet was hosted by ACAA's Executive Director Sam Tyson and ACAA Chairman Andy Stewart. The program included the announcement of the John Faber Scholarship Program, sponsored by ACAA's Educational Foundation. Mr. Faber was the chairman of the association when it was called the National Ash Association in 1967. ACAA also took this opportunity to recognize three newly elected honorary members; Claude K. Brown, James P. Plumb and James K. Weeks. ACAA service awards were presented to Oscar E. Manz of Manz and Associates for his work with ASTM, James D. Burnell of Allegheny Power Services Corporation, for his coordination of ACAA Ash Managers program; and Tracy L. Wandell of Sphere Services, Inc. for his work on ACAA's promotional items.

At the banquet, Memorial Awards were presented in honor of Luciano A. Marcuz, Barton A. Thomas and Jack W. Weber. ACAA presented a Government Recognition Certificate to; Thomas C. Ruppel of the United States Department of Energy (Retired), for his work organizing conferences and for coordinating publication of proceedings on "Unburned Carbonaceous Material on Utility Fly Ash" [March 1995 and March 1996], and; Suneel Vanikar of the Federal Highway Administration for the coordination, development and publishing of FHWA's "Fly Ash Facts for Highway Engineers" publication [August 1995].

A golf tournament benefiting the ACAA Educational Foundation's Scholarship program was held on Wednesday, January 29, at the Lake Buena Vista Golf Course. The event was well received and will continue to be a regular part of ACAA's symposium experience in years to come. ACAA also hosted spouse activities, a program that is also expected to grow. Declaring the Twelfth International Symposium on Management and Use of Coal Combustion Byproducts a success, ACAA turns its efforts to 1999 and the Thirteenth International Symposium, also to be held in Orlando.

Trade Shows - Exhibits

National Recycling Coalition - 15th Annual Congress and Exposition

Lisa Harrington, ACAA's Manager of Finance and Administration, was in Pittsburgh, Pennsylvania, September 17-19, 1996 for the National Recycling Coalition's 15th Annual Congress and Exposition. The theme for the Congress and Exhibition was "Revitalizing America's Future". ACAA joined over 160 recycling-based exhibitors at the event. Attendance for the conference was over 2,500. The exhibits complimented some 60 educational sessions.

The NRC Annual Congress and Exposition gives ACAA a chance to put and emphasis on the reuse of CCBs in a variety of applications. At the 1995 Congress and Exposition, ACAA was approached by the Buy Recycled Business Alliance to help create a fact sheet called "Buy Recycled Coal Fly Ash". The four page, full color document was completed earlier this year by ACAA staff and published in cooperation with the National Recycling Coalition and Buy Recycled Business Alliance. The flyer is part of the successful "Buy Recycled" series that includes recycling information on products such as tires and oil. "Buy Recycled Coal Fly Ash" was a popular publication with attendees at this year's conference. The "Buy Recycled Coal Fly Ash" fact sheet is available through ACAA and continues to be a good publication to answer "general information" inquiries about CCBs. The National Recycling Coalition 16th Annual Congress and Exposition will be held in Orlando, in 1997.

Trade Shows - Exhibits

Power Gen '96

ACAA's Communications Coordinator Gregg Deinhart traveled to Orlando, Florida Power-Gen '96, December 4-6, 1996. Over 5,500 exhibitors and over 14,000 attendees were present for the annual conference, held in Orlando's Orange County Convention Center.

ACAA has sent the exhibit and staff to this meeting in recent years but the 1996 event was significant because it gave ACAA an excellent opportunity to promote the 12th International Symposium on Management and Use of Coal Combustion Byproducts, also held in Orlando, January 26-30, 1997.

Traffic at the booth was brisk throughout the conference and a good deal of information about the symposium was passed out to the conference attendees. A special thanks goes out to Dan Crawford of Wallace Industries, who made frequent trips by the ACAA booth helping staff promote ACAA at busy times. This was the first opportunity at Power-Gen to promote ACAA'a Home Page and it turned out to be a success. Power-Gen '97 will be held in Dallas, Texas, December 4-6, 1997.

Trade Shows - Exhibits

Superfund

HazWaste World's Superfund XVII was held October 15-17, 1996 at the Washington Convention Center in Washington, DC. The Nation's largest environmental exhibition and conference played host to over 300 booths and 4,500 attendees. This year's symposium theme "Going Global" focused on the international importance of global waste management, but USA EPA, DOE and DOD participation was also a key subject of interest.

The recently published, ACAA Publication was a popular handout. The conference also provided ACAA with an ideal opportunity to promote the Symposium in Orlando. The booth was managed by ACAA's John Conners who returned with some key contacts for future ACAA meetings. HazWaste World's Superfund XVIII will be held December 2-4, 1997 at the Sheraton Hotel in Washington, DC.

Internet News - Internet News - Internet News

It's Easy to Link to ACAA's Home Page!

Now that ACAA's home page is up and running, the challenge for staff is how to make it best help our members directly while continuing to spread the word of the association to interested people throughout the word. Our home page needs to grow and change frequently to keep people coming back for more.

One area of growth that is already being explored is the linking of ACAA's home page directly to member's home pages. Links enable you to gain more information about a topic by electronically connecting you to another part of the home page you are on or take you to another home page on the world wide web. Links are the "short cut" used to connect ACAA's home page with pages of our members or other industry related home pages. ACAA currently has a list of links in both categories and are asking members to add their home pages, plus inform us of other CCB related pages.

If you would like your home page linked to ACAA, contact ACAA's Communications Coordinator, Gregg Deinhart. The only information we need is the address of the home page that you want us to link to. Also, if you have a related industry page you would like ACAA to link to, please send that information as well.

Internet Q&A

What You've Always Wanted To Know About the Internet, But Were Too Afraid to Ask!
If you're new to the internet, this collection of questions and answers might help you out.

What is the Internet and how does it work?

The Internet is a global system of computers connected with each other allowing users to communicate with one another electronically. In the simplest of terms, the Internet is a network of networks. When you are on the Internet and you request information, your request goes from computer to computer until it finds a computer that has the information. Think of the requested information as an assembled jigsaw puzzle. The information is sent over piece by piece through phone lines and reassembled at its destination. The TCP/IP (Transmission Control Protocol/Internet Protocol) tell the computer exactly how to reassemble the jigsaw puzzle on the user's computer.

(see Internet Q&A on page 11)

Duke Power's Internet/Intranet

Duke Power is currently using internet technology to move "one step closer to a virtual paperless environment where all information is at the touch of a button". Barry Long, one of Duke's senior engineers was quoted referring to Duke's plant design/engineering system called PASCE in Engineering News-Record. According to ERN, "PASCE is a suite of application modules used for plant designing/engineering, and for management of plant information over the life of the facility".

In the past, information about PASCE models had to be gathered through a process that took hours or days. Now the information is available, in a secure environment, electronically. Through internet connections, members of Duke's PASCE team can access this important "intranet" (internal internet) information from work or home.

In addition to these intranet technologies, Duke is also using the World Wide Web to reach out to their approximately 1.7 million customers. Duke Power's home page can be found at http://www.dukepower.com. This easy to negotiate Home Page is full of information about Duke from news releases and consumer information to career opportunities.

More Internet Q&A

(continued from page 10)

Where did the Internet come from?

The Internet started in the late 70's as an experiment at the Department of Defense's Advance Research Project Agency (ARPA). It was the idea of Bob Taylor, who at the time was Director of computer research at ARPA. The purpose of this first network, known as ARPANET, was to fulfill the need for computer systems of various manufacturers in different locations to share data.

The number of sites grew as military bases and companies with defense contracts were added to this one system. The government has also been generous is subsidizing access to the Internet to educational institutions. In 1984, for security reasons, the military side of ARPANET became a closed network (MILNET). This left the education side, which we now know as the Internet.

How do I get connected?

To connect onto the Internet, you need a computer, a modem, and a connection to the Internet. It does not matter if you have an IBM compatible or Macintosh, I recommend a modem with a speed of at least 14,400 bytes per second. Since, every home page uses graphics, anything slower will be unbearable.

Finally you need full access to the Internet via SLIP, PPP or shell account. There are many ways to get access. One of the most popular is a commercial on-line service, e.g. America On-line, Prodigy, and CompuServe. These services are essentially private networks that have gateways. You can also sign up direct through an ISP (Internet Service Provider). Some of the largest in the nation are MCI, Netcom, PSI, UUNET, Concentric, and Sprint. Costs to access the Internet ranges in price from \$9.95 for five hours to \$30 for unlimited access.

If you have any further questions about ACAA's activities on the internet, contact ACAA's Communications Coordinator Gregg Deinhart. He can be reached via e-mail at <ACAA-Deinhart@msn.com>.

Calendar of ACAA Events

Quarterly Meeting are being finalized for both 1997 and 1998. ACAA will host ACAA's 13th International Symposium in Orlando in January of 1999.

1997

April - Austin, TX July - Minneapolis, MN October - Minneapolis, MN

1998

January - Clearwater, FL April - Atlanta, GA June - Toronto, ON October - Las Vegas, UT

1999

Orlando (Symposium)

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Member News - Sphere Services

Tracy Wandell of Sphere services has been busy spreading the word about cenospheres. Recently, Wandell was featured in two publications praising the value of CCBs and offering his story to both the general public and members of the trade. Cenospheres: From Waste to Profits is the title of an article that appeared in *Ceramic Bulletin Magazine*. If offered both an overview of cenospheres, some detailed technical information and insights on marketing of products containing cenospheres. Sphere Services was also featured in an article published in the Clinton News-Sentinel in Clinton, Tennessee.



INNOVATION FOR A SUSTAINABLE FUTURE

ACAA's Coal Combustion Byproducts
(CC3s) - Innovation for a Sustainable
Future tells the story of CCBs using a

wide range of full-color photographs and informative text. The "coffee table" book is currently in

production and will be published early in 1997.

Coal Combustion Byproducts (CCBs) - Innovation for a Sustainable is available for \$35 for ACAA members and \$75 for non-members.

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