

ASH AT WORK

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Reno Selected For 6th Ash Symposium

WASHINGTON (Special)—Plans are being formulated for the Sixth International Ash Utilization Symposium to be held March 7-10, 1982.

NAA President Gerald Bowdren disclosed the Executive Committee voted to hold the three-day program at the MGM Grand Hotel in Reno, Nevada after considering sites in Florida, Georgia, and Louisiana.

The spokesman also reported Secretary Allan W. Babcock would serve as chairman of the Steering Committee planning the event. Other members named were James P. Plumb of Houston Lighting & Power Co., Stephen Benza of Pennsylvania Power & Light Co., and Richard Ondreyko of New York State Electric & Gas Co.

The newly formed Marketing Council designated Austin T. Morgan of Monier Resources, Inc. and John B. Ashby of Pozzolan, Inc. Symposium co-sponsors have also been asked to name representatives to the planning group.

The NAA has concurrently issued a "Call For Papers" for the internationally attended event. The Challenge of Change will be the theme for the Reno program. (See insert)

Chairman Babcock stated a block of 300 rooms including singles, doubles, and suites have been reserved for the symposium starting at a modest flat rate of \$46. He said the MGM Grand, a 2,000-room convention center, includes the world's largest casino, seven restaurants, two movie theaters, a 50-lane bowling center, indoor tennis, and 40 shops.

The Call for Papers is soliciting technical papers in the following areas: (1) Quality Control, (2) Regulations-Guidelines, (3) Resource Recovery, (4) Research, (5) Product Marketing, and (6) Application Techniques.

An August 1 deadline has been set for the receipt of presentation abstracts, Chairman Babcock stated. Manuscripts selected for pre-printing will be due December 1.

Bowdren Named New NAA President



MGM Grand-Reno

WASHINGTON—Gerald W. Bowdren, Manager—Technical Support for Public Service Electric & Gas Co. headquartered in Newark, NJ, is the new president of the National Ash Association.

He was elevated to the position at the annual meeting of the NAA Board of Directors here on April 1 succeeding Ronald E. Morrison of American Electric Power Service Corp. The latter had completed two terms as head of ash industry trade association.

Other officers named to one-year terms were R. W. Bryant, Colorado-Ute Electric Association, Inc., vice president; James P. Plumb, Houston Lighting and Power Co., vice president; Constance Holmes, National Coal Association, vice president; Allan W. Babcock, Allegheny Power Service Corp., secretary-treasurer; Neil Bevere, Ohio Edison Co., Ass't. Secretary - Ass't. Treasurer; and James N. Covey, Executive Vice President.

The directors then selected an Executive Committee comprised of President Bowdren, Babcock, Bryant, Bevere, Morrison, Plumb, Ms. Holmes, Gary R. Fuhrman of Baltimore Gas & Electric Co., and John R. Dorsett of Texas Utilities Generating Co. to have and exercise all the powers of the Board between meetings of that body.

In accepting the office, President Bowdren indicated that one of his primary goals will be to see that the entire membership becomes more actively involved in the work of the Association. He plans to accomplish this objective by appointing a number

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Marketing Council Is Formed With Craig Cain As Chairman

CHICAGO, IL—Craig Cain, president of American Fly Ash Company, was named chairman of the NAA's newly formed Marketing Council at an organizational meeting of the Council here on April 23.

The 18 delegates also designated Jack Weber of Weber/McNeil to represent the Council on the NAA Board of Directors and L.E. (Tex) Leber of Nebraska Ash Co. on the Executive Committee.

Secretarial services to the Council will be provided through the office of NAA Executive Director James N. Covey. The latter participated in the discussions.

Paul Viall, President of Penn-Virginia Materials Corporation and a member of the NAA Board of Directors, was named to head a Promotion Committee to study and recommend programs and aids to improve the marketability of power plant ash. Others on the committee are Mr. Weber, Jim Foley of Michigan Foundations Co., Bill Rogers of Chem Ash, Inc. and John Fowler of Western Ash Co.

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Program Is Set For Kentucky Ash Event

LEXINGTON, KY.—More than 100 registrants are expected for the Seventh Kentucky Coal By-Products Seminar here on June 12 featuring a study of the "Utilization of Power Plant Ash."

The one-day program is being co-sponsored by the Institute for Mining & Minerals Research (IMMR) and the National Ash Association.

Dr. Jerry G. Rose, Associate Professor of Civil Engineering at the University of Kentucky, and NAA Executive Director James N. Covey are coordinating the program.

A \$25 fee is being charged for those in attendance which will include a luncheon. The program will be held at the Harley Hotel on 2143 North Broadway.

Topics to be discussed include "An Effective Ash Marketing Program—Utility Management's Responsibility;" "Quality Control of Fly Ash—The Combustion Process;" "Utilization of Fly Ash in Concrete;" "Fly Ash Structural Fill—Housing and Highways;" and "Lime-Fly Ash-Aggregate Road Base."

Presenters, in addition to Covey, will include Ronald E. Morrison and Dennis L. Kinder of American Electric Power Service Corporation; Robert W. Stryon, Ash Technology, Inc. of Atlanta, GA; and John Ashby, Pozzolan, Inc., of Cincinnati, OH.

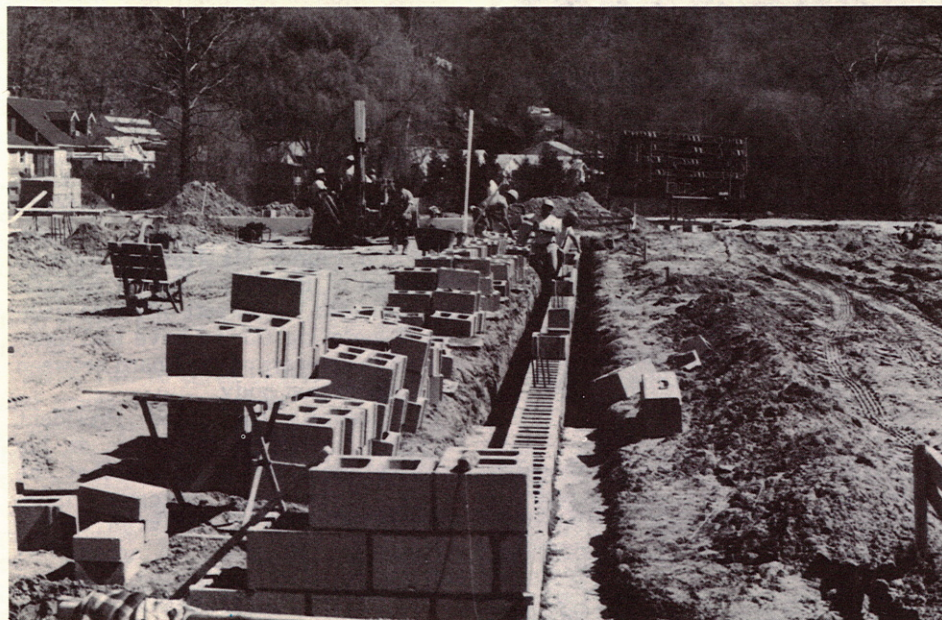
MARKETING COUNCIL

(Continued From Page 1)

The Council reviewed and accepted a dues structure ranging from a minimum of \$1,000 per year to a maximum assessment of \$5,000 for members marketing in excess of 100,000 tons of ash annually.

A decision on criteria for membership on the Council was postponed to allow further study of ethical and performance standards, Cain stated. In approving the formation of the Council at its annual meeting the NAA directors asked that the criteria be consistent with the goals and objectives of the trade association.

Participants included Gerry Gordon, Monier Resources, Inc.; Brian Nagle, Iowa Fly Ash Co.; Bill Collins, National Minerals Corp.; Roderick McNeil, Weber/McNeil; John Ashby, Pozzolan, Inc.; Larry Dukewits, Walter W. Handy, Co., Inc.; Neil Barker, American Fly Ash Co.; Barton Thomas, JTM Industries, Inc.; Bill Grosz, Basin Electric Power Co-op; Oscar Manz, Coal By-Products Utilization Institute; Hal Payne, American Fly Ash; Messrs. Cain, Weber, Rogers, Viall, Fowler, Foley, Leber and Covey.



SHOPPING MALL GOING UP ON FLY ASH STRUCTURAL FILL—Eleven stores, including a Kroger Superstore Complex, are being constructed on a six acre fly ash fill at Gauley Bridge near Charleston, WV. Approximately 45,000 tons of fly ash from Appalachian Power Company's Kanawha River Station have been placed in the fill, overlooking the confluence of New River and Gauley River and protected by an eight-foot earthen berm around the perimeter of the site. Work on the fill started at mid-winter in January 1981 and was completed two months later with densities in excess of 95 percent of standard proctor. Additionally, the stores in the R. F. Johnson Mall are being constructed with fly ash concrete blocks supplied by the Peerless Block Company of St. Albans. The contractor on the project is Gilkerson Bros. of Charleston. The top photo depicts a portion of the completed fill and lower picture shows workmen laying the 12-inch fly ash blocks for the Kroger complex.

Ash Seminars Held in Detroit, Kansas City

Attendees at recent ash seminars held in Detroit and Kansas City have reacted favorably to presentations on ash management and utilization, according to NAA Executive Director James N. Covey.

The Michigan audience included highway engineers, consultants, ash users and producers in a program sponsored by the Detroit Builders Exchange. Personnel from 20 investor-owned electric utilities attended the 1981 conference of the Missouri Valley Electric Association—MVEA's 52nd Annual Conference.

A brief resume of the subject matter discussed in the two sessions are covered under separate report immediately below this introduction.

DETROIT—The use of fly ash in structural fills and stabilized basemixes were reviewed for members of the Builders Exchange in a program sponsored by the Michigan Foundation Company. Director Covey and Dennis L. Kinder of American Electric Power Service Corporation were the guest speakers.

Kinder detailed the procedures for properly placing a structural fill including site preparation, ash handling, compaction, and perimeter treatment. He documented his presentation with slides.

The AEP ash engineer also reviewed the use of fly ash and bottom ash in cement-treated and asphalt basemixes in highway construction.

The NAA Director presented a general overview of ash applications in which he emphasized the need for testing, quality control, and environmental considerations.

Builders Exchange members and guests in attendance included Ralph Posnick, Michigan Department of Transportation; Mike Yoshii and Matt Wisenberg, Bechtel Power Co.; Zeyn Uzman, Smith, Hinchman & Grylls Associates; Ed Lindow, Soil & Materials Engineers; Steve Bainbridge, City of Trenton/Engineers; Miles Merwin, Detroit Edison; Tom Daykin, Kaufmann Construction Co.; Joe Neussendorfer, Builders Exchange; Tom Adams, Ernst Fuel & Supply Co.; Bill Strobel, Earl Colburn, Leonard Bell, Clawson Concrete; W. K. Swartzen-druher, Michigan Testing Engineers; Rod Clifton, Trobilt Building Co.; John Gooding, Michigan Dept. of Transportation; Larry Jedele and Timothy Carpenter, Stoll Evans Co.; Dave Nona, Neyer, Tiseo, & Hindo, Ltd.; Al Elastyell, Lightway Systems.

Jim Foley, John Formentin, Leo Shavkey, and Wayne Hatchett, Michigan Foundation Co.; Rick Kincaid, Mike McCormick, James Comins, Lou Wylie, Mark Klopfer, Anil Desai; Subhas Bose, and George Alther.

Mr. Hatchett said he was pleased with the manner in which the data was received and stated his firm has two new projects in the planning stage as a direct result of the seminar.

KANSAS CITY—More than 100 power generation officials from utilities in a four-state area heard a message from NAA Director Covey that "ash management" is an important element of the power production cycle.

Covey emphasized "ash producers can no longer consider or treat ashes as waste materials to be indiscriminately disposed of in areas where the water table will be affected."

He also noted that "if ashes are to compete in the market place with other natural resources, then they must be treated as useful engineering construction materials." The NAA executive concluded that ash is a recoverable resource that can make a vital contribution to the economic posture of both the ash producer and the construction industry.

MVEA companies in attendance were Arkansas-Missouri Power Company, Empire District Electric Co., Iowa Electric Light & Power Co., Iowa-Illinois Gas & Electric Co., Iowa Power & Light Co., Iowa Southern Utilities Co., Kansas City Power & Light Co., Kansas Gas & Electric Co., Kansas Power & Light Co., Missouri Edison Co., Missouri Power & Light Co., Missouri Public Service Co., Missouri Utilities Co., Oklahoma Gas & Electric Co., Public Service Company of Oklahoma, St. Joseph Light & Power, Southwestern Electric Power Co., Union Electric Co., Western Power Division of Central Telephone & Utilities Corp.

New Ash Role

TOLEDO, OH—New opportunities in pozzolanic concrete in pavement construction will be featured at the national meeting of the American Pozzolanic Concrete Association here on May 19-20.

A special session has been set to evaluate the performance of lime-fly ash aggregate and kiln dust-fly ash aggregate bases and sub-bases.

EPA Guidelines Seen In Place By September

WASHINGTON—The Environmental Protection Agency hopes to have the guidelines for the Federal Procurement of Cement and Concrete Products Containing Fly Ash in place by September 1981.

EPA staff members are evaluating the 161 written comments that were received in addition to the oral presentations made at the January 8 hearing before preparing the final documents.

A spokesman said he believed the end product would contain reasonable and practical regulations that would encourage the expanded use of products containing these recoverable by-products.

A principal concern of opponents centered on the mandatory use of power plant ash and the increased need for quality control and assurance.

In its testimony, the National Ash Association stated it "is incumbent upon the producer to institute quality control measures to permit the supplier to certify his product to the user."

BOWDREN IS NAMED

(Continued from Page 1)

of committees to function in various work areas.

One innovative group will be an Auditing Committee to monitor the activities of the Executive Committee and Executive Director in the day-to-day operation of the Association to assure that the programs and policies being promulgated are moving the NAA ahead in concert with overall aims and objectives. Prime movers of this body will be directors who are not officers of the Association.

The governing body asked Director Covey to proceed with the screening and selection of a technical assistant to work with members in all areas of ash management and utilization.

The directors also approved an operating budget totaling \$343,800 for the coming year running through March 31, 1982.

In other action, a three-man committee headed by A. V. Hume of Consumers Power Company was asked to review the entire NAA dues structure in addition to studying alternatives for utility members burning high ash sub-bituminous and lignite coals. Others participating in the evaluation are Vice President Plumb and Steve Benza of Pennsylvania Light & Power Co.

Tests Show Self-Hardening Arkansas Fly Ash Good Soil Stabilizer

FAYETTEVILLE, AR—Fly ash produced from the burning of low sulfur sub-bituminous Wyoming coals is self-hardening and can be effective as a soil stabilizing agent for clays and sands.

This was the conclusion reached by two University of Arkansas researchers—Sam I. Thornton and David G. Parker—as a result of field tests conducted in cooperation with the Federal Highway Administration and the Arkansas Highway and Transportation Department.

The field tests were made at Southwestern Electric Power Company's Flint Creek Power Station to determine the effectiveness of equipment and procedures in soil-fly ash construction.

Ashes tested were produced at SWEP CO's power plants at Cason, Texas and at Flint Creek. Three test strips, each 250 feet long, contained varying quantities of fly ash—10%, 20%, and 30 percent. The ash was supplied by Gifford Hill Company, a member of the National Ash Association.

The final report noted that adequate mixing of the soil and fly ash plus a rapid compaction of the mixtures were found to be important parameters in the field construction of stabilized bases.

Professors Thornton and Parker stated the strength of soil-self hardening fly ash develops rapidly when compacted immediately after mixing. Seven day unconfined compressive strengths up to 1800 psi were obtained from 20% fly ash and 80% sand mixtures.

Conversely, a time delay between mixing and compaction reduced the overall strength. A two hour delay resulted in a one-third strength loss and a 50 percent loss with four hours delay.

The sequence of construction of the field strips, placed in July, 1978, was as follows:

First, two to three inches of top soil and grass were removed by a motor grader; water was added by spraying from a water truck; fly ash was applied to the strips with a truck mounted chemical spreader; mixing was accomplished with one pass of 7.5 foot wide pulvermixer set at six inches; and compaction was done with a rubber tired roller.

The strips were then sealed with a thin coat of "prime oil" to prevent evaporation.

Densities recorded of the soil-fly ash mixtures ranged between 1.52 and 1.63 (95 pcf and 102 pcf) as compared to a maximum density (modified Proctor) of 1.87 for a 20% fly ash mixture.

In spite of low field strength, Thornton reported the compacted base showed no distress when used as a tem-

CONCLUSIONS

Seven conclusions resulting from the study were listed as follows:

1. Self-hardening fly ash produced in Arkansas can stabilize road bases;

2. The strength of soil-fly ash mixtures may be reduced substantially by time delay between mixing and compaction;

3. Gypsum and some commercial cement retarders are effective in reducing the adverse effects of delayed compaction;

4. Fly ash stabilization works best in sands and clays because of better mechanical interlock with soil particles;

5. Fly ash characteristics vary widely. Quality control of ash for stabilization is desirable;

6. Adequate mixing of soil and fly ash in the field is necessary;

7. Rapid compaction of soil and fly ash is necessary. Compaction should be completed within two hours after mixing with equipment heavy enough to reach specified density.

porary haul road for heavy loads of fill material.

The density of mixtures decreased and the strength increased with increasing fly ash percentages. The optimum strength with 20 percent fly ash and no delay was set at 450 psi which compared favorably with lab tests utilizing Texas fly ash mixtures.

The fly ashes used in the study had calcium oxide contents from 20 to 30 percent.



Spreading Fly Ash



Compacting Base



Applying Seal Coat



Preparing Site