ASH AT WORK

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Covey Is Choice As NAA Director

WASHINGTON—The National Ash Association selected James N. (Jim) Covey of Rochester, NY, as its new executive director during the annual meeting of the Board of Directors here on March 20. He assumed the post on April 1.

The 52-year-old Covey, a former Manager of Civil Engineering for Rochester Gas & Electric Corporation, is a two-term president of the Association. He has served on the NAA Board of Directors for nine years.

In accepting his new post, Covey stated, "I was in on the formation of the Association, have always worked for it and will continue to give it my highest effort."

Faber Is Consultant

He succeeds John H. Faber, who relinquished the job after managing the day-to-day operations of the trade association from it inception in 1968. Faber has since signed a one-year contract to serve as a part-time consultant to the NAA.

The new director indicated top priority is being given to hiring a staff member who is well versed in ash technology. "His primary function will be to act as a trouble shooter for members in all areas of ash management and marketing," Covey related.

The NAA executive said he viewed his mission as maintaining a close liaison with top management officials of member companies while continuing to promote increased ash utilization programs with allied interests.

Covey also asserted it was important that designated board members play a more active role in planning and carrying out association programs.

In other action at the annual meeting, Clark Harrison of Pennsylvania Power & Light Co. was named to chair a Committee of Liaison with the Utility Solid Waste Activities Group (USWAG) and G. W. Bowdren of Public Service Gas & Electric to head a Committee of Liaison with the Electric Power Research Institute (EPRI).

Director Covey was also directed to negotiate a new one-year lease for the present office space held by the Association. The possible relocation of the office into surburban Virginia or Maryland or to another area of the country is also under investigation.

Morrison Retained As Ash President

Ronald E. Morrison, head ash utilization and research section, for American Electric Power Company and headquartered in Charleston, WV, was elected to his second term as president of the National Ash Association.

Other team members designated to serve until the NAA's next annual meeting were G. W. Bowdren, Public Service Electric & Gas Co.; C. D. Holmes, National Coal Association; James Plumb, Houston Lighting & Power Co. as Vice Presidents; Clark Harrison, Pennsylvania Light & Power Co., Assistant Vice President; and Allan W. Babcock, Monongahela Power Co., Assistant Secretary/Treasurer.

The Board of Directors also named an Executive Committee composed of President Morrison; VP's Bowdren, Plumb, Holmes, and Harrison; Neil Bevere, Ohio Edison Co.; A. L. Brink, Iowa Public Service Co.; A. V. Hume, Consumers Power Co.; L. J. O'Callaghan, Potomac Electric Power Corporation; Paul Viall, Jr., Penn Virginia Materials Corporation.

New Memberships Available in NAA

A new membership category has been enacted by the NAA for non-coal burning electric utilities so staff members can be appraised of the importance of ash management and marketing prior to the conversion of gas or oil fired units to fossil fuels or the start-up of new units.

Interested firms will join on a non-voting basis with an automatic conversion to Class P voting status at the start-up of coal consumption.

The initial dues structure was set at $500/year. Full membership dues are based on 2.25 mills per tons of coal burned for electric generation with an annual minimum of $2,500 and a maximum of $30,000.

The change was adopted to further implement the establishment of proposed three-year Technical Awareness Program (TAP).

Director Jim Covey said he welcomed the change and indicated the move opens the door for the NAA to become actively engaged in training programs for member companies prior to the generation of power plant ash.

"I view this as one of the major functions of the new technical staff member when he is chosen and is on board," Covey asserted.

The industry spokesman added that ash management and utilization has evolved into a science and the lead time prior to placing coal-fired units on stream can be advantageously used to prepare in-house staff members to

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Bottom Ash Backfill Used To Protect Wall

CHARLESTON, WV—Bottom ash was utilized as a lightweight backfill against a collapsed retaining wall at the Cultural Center here at the West Virginia Capitol Complex.

A 150-foot section of the wall at the rear parking lot of the center began failing in January 1979 and three factors led to a decision to use ash to replace the original backfill material after it had been pulled back in place.

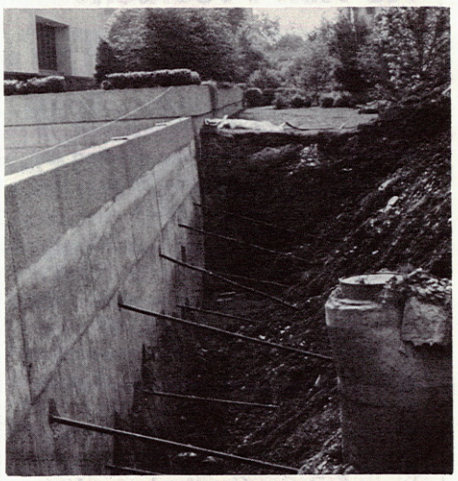
Factors influencing the choice of bottom ash from American Electric Power Company's Kanawha River Station were: (1) its lightweight—60-pounds per cubic foot, (2) its permeability, and (3) its low cost.

In solving the problem the contractor, Six Industries of Cleveland, OH, first removed the original backfill, then drilled the wall, put retaining bolts through the structure and anchored them in place, and slowly pulled the wall back into place.

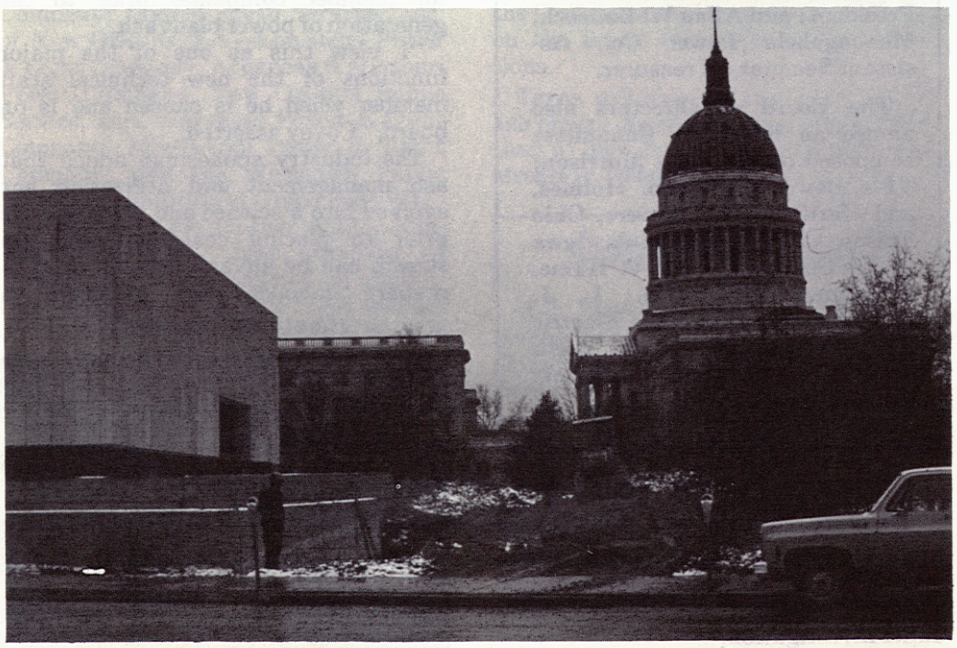
The bottom ash was then placed behind the wall and compacted in 10-inch lifts. Hand tamping was necessary because of the anchor bolts. When the ash was brought to the proper level the material was covered with top soil and the area re-seeded. A total of 727 tons of bottom ash was used on the project.

The retaining wall was constructed in 1975.

→ *Anchor Bolts In Place*



↓ *Bottom Ash Placed Behind Wall*



Zeelan To Use Ash In Paints, Plastics

CHARLESTON, WV—A Minneapolis-based firm has announced plans to build a factory in the Rock Branch Industrial Park near here to turn fly ash into a product to stretch paint and plastics.

Zeelan Company has signed a long-term contract with American Electric Power Company to purchase 80-100 tons of ash per day from the utility's John Amos Station to manufacture the crystal-like product. The solid spheres of ash being used in the process are in the 50/75 micron size range.

The company has demonstrated in Minnesota that the product can be added to paints and plastics to increase their bonding strength and make them go further.

The plant would employ 15-20 persons initially. No timetable has been set for construction.

Personal Profile

James N. Covey

James N. (Jim) Covey, the NAA's new executive director, is no stranger to the association or the ash industry.

He was in on the formation of the NAA in 1968, has had almost continuous service on the Board of Directors, and is a a two-term president (1971-1973) while representing Rochester Gas & Electric Corporation.

Covey, who initiated RG & E's ash marketing program, says it took two years before the utility sold its first ash. When he left the company, the Rochester-based producer was marketing 28 percent of its ash.

A native of Big Moose, NY, Jim attended public school in the Rochester area and graduated from Syracuse University with a B.S. degree in Civil Engineering. He is a registered professional engineer and a fellow in the American Society of Civil Engineers.

The 52-year-old Covey joined RG & E in 1952 as a technical engineer. He later became Superintendent of General Maintenance, chief civil engineer, and was manager of Civil Engineering when he completed his tenure with the company.

Jim is an avid swimmer and a certified SCUBA diver. He and his wife, Allene, will establish residence in the Washington area when she recovers from elective surgery. Mrs. Covey is a licensed Professional Nurse in New York State.

His two children, James and Cheryl, reside in the Rochester area.

Utility Coal Use Up

WASHINGTON—Electric utilities in the United States consumed a record 50.4 million tons of coal during January 1980, according to the National Coal Association.

The NCA said nearly 30 percent of the coal used in January was burned in the eastern and midwestern states of Ohio, Michigan, Indiana, Kentucky, Pennsylvania, Maryland, Virginia and West Virginia.

Steel Fibers, Fly Ash in Concrete Ramps at Nevada Airport

LAS VEGAS—Eighteen acres of new parking/arrival ramps at McCarran International Airport here have been constructed of concrete pavement utilizing steel fibers and fly ash in the mix design.

The project was part of a $3 million expansion program carried out by Clark County to improve the facility. Kasler Corporation of San Bernadino, CA., were the contractors on the paving program.

The two ingredients, still relatively new in airport pavement construction, were specified in order to achieve the necessary high strengths with a thinner slab. The ramps were designed to carry the concentrated parked weight of jet aircraft with gross wheel loadings of 750,000 pounds.

The slab thickness of the fibrous-reinforced concrete was set at 7-inches compared to the 15 inches normally used in airport construction. The higher flexural strength of concrete also eliminated the need for keyed longitudinal joints (or tie bars) between lanes or for dowels at the transverse joints.

Additionally, the seven-inch mat was placed in 50-foot sections rather than the conventional 25-ft. lengths which halved joint maintenance costs. This was attributable to the high flexural strength of the mix.

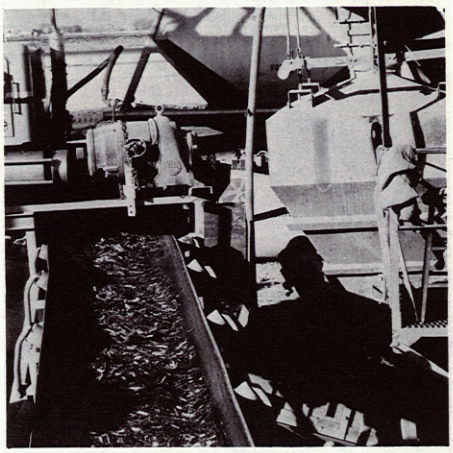
Steel fibers with a tensile strength of 50,000 psi were specified for the job. A super-rich design mix of nine sacks of portland cement was calculated with the addition of 85 lbs. of steel fibers—in strands 2-inches long and 0.02 in. in diameter—to each cubic yard of concrete.

Fly ash, steel fibers used in concrete at Vegas airport

The Clark County engineers first turned to fly ash as a solution to the higher-than-normal heat of hydration associated with the super-rich design mixes.

Thus, by substituting fly ash for 35 percent by volume of the cement, the design was brought back to a seven sack mix and reducing the potential for cracking due to hydration heat.

The contractor also got a construction bonus from the use of the fly ash. The workability of the mat was markedly increased due to the spherical shape of the ash granules. Without the need for added water, the slump of the mix increased from 1-2 in. range to a 3-4 in. range, which was considered just right for slipforming the dense material into the 25-foot wide lanes.



Feeding Steel Fibers

The mix design called for 650 lbs. of portland cement, 252 lbs. of fly ash, 1,370 lbs. of sand, 1,315 lbs. of pea gravel, 41 gal. of water, 36 oz. of water reducing agent, and 85 lbs. of steel fibers. The slab was supported by a substructure consisting of 12-inches of compacted subbase material topped with 2-inches of asphaltic concrete.

The 2,400 tons of fly ash needed for the job was supplied by Western Ash Company of Phoenix, AZ. The material was trucked to the job site from Southern California Edison Company's Mohave Station at Laughlin, Nevada.

Beam samples were taken every 250 cu. yds. and consistently broke (in 28 days) at 1,050 psi (third point loading) adequately over the 900 psi specified by the Federal Aviation Administration.

What about comparable costs? Clark County officials report the fibrous-fly ash concrete portion of the pavement (including finishing, saw cutting, joint filling) costed out to $22.00 per square yard. The per cubic yard cost of the concrete was $113 compared to $60 for conventional concrete. But because less than half as much fibrous concrete was required for the thinner slab the material costs were about even.

For the same money, officials feel they've attained a superior product.

However, job officials feel the slab will perform as a continuously reinforced concrete (CRC) structure in all directions, cracking is expected to be virtually non-existent, thus assuring long, trouble-free performance.

(Data and pictures courtesy Rocky Mountain Construction, February 8, 1980)

Mix is Windrowed

Reprints Available

PALO ALTO, CA—A "Fly Ash Structural Fill Handbook" has been released by the Electric Power Research Institute (EPRI) headquartered here, covering the design of structural fills and embankments utilizing fly ash as a substitute for conventional materials.

The manual was prepared by GAI Consultants, Inc. of Pittsburgh under the direction of Dr. A. M. DiGioia Jr.

Topics references include the collection and handling of fly ash, properties affecting its behavior as a construction material, lab test procedures, design analysis, and construction methods.

Requests for copies should be directed to Research Reports Center (RRCO, P. O. Box 50490, Palo Alto, CA 94303. There is no charge for reports by EPRI members, U.S. utility associations (NAA), governmental agencies, or the media.

New Memberships

(Continued from page 1)

properly handle and market these construction materials.

At its annual meeting, the NAA also approved memberships for three (3) electric utilities as Class P voting units and four Class O non-voting members.

The new utilities joining the Association were Texas Utilities Generating Company of Dallas, TX—Texas Power & Light Company, Texas Electric Service Company, Dallas Power & Light Company; Middle South Services, Inc. of New Orleans, LA—Louisiana Power & Light Company, Arkansas & Missouri Power Company, New Orleans Public Service, Inc., Arkansas Power & Light Company, Mississippi Power & Light Company; and the Wisconsin Public Service Corporation of Green Bay, WI.

Since that time another utility, Minnesota Power & Light Company of Duluth, MN, has submitted an application for membership. The NAA will act on the application at its next regular meeting.

The non-ash producing members approved were Acres American, Inc. of Washington, D.C.; The Babcock & Wilcox Company of Barberton, OH; McNeil Brothers, Inc. of Milford, CO; and United Conveyor Corporation of Chicago, IL.

Up to this point interest in the TAP program has resulted in the enrollment of 10 new ash producing utilities.

Texas Hosting Ash Seminar

COLLEGE STATION, TX—More than 200 persons have pre-registered for the Ash Management Conference slated to be held on the campus of Texas A & M University here May 20-21 under the sponsorship of the Texas Transportation Institute.

W. B. Ledbetter, a research engineer for the Institute, is again serving as program coordinator. He directed a similiar successful conference here in 1978.

The event will also be the first ash industry program to be attended by Executive Director Jim Covey. He will present a brief resume of the NAA and a projection of the future role of ash as a construction material.

Technical presentations are scheduled by speakers representing the ash producer, the researcher, the designer, the regulator, and user.

Among the subjects to be addressed in the two-day conference are (1) Fly Ash Specifications and Quality Control —Bob Stryon of Ash Technology, Inc.; (2) Problems With Acceptance of Fly Ash As a Useful Product—Lou Marcuz of Ash Management Systems; (3) Ash Utilization in Soil Stabilization—Bob Long of Texas Department of Highways and Public Transportation; (4) A Cement Company's Experience with Fly Ash in Blended Cements—D. Selby of Gulf Coast Portland Cement Co.; and (5) A Grouting Company's Experience with Fly Ash—John Del Val of Del Val Company.

All speakers were to emphasize practical examples of ash utilization in the Gulf Coast region as well as focusing on the latest techniques and applications.

Texas will soon be one of the major ash producing states in the nation. More than 37 new coal-fired units will be on stream in Texas by 1985.

EEI-NAA Begin Survey

Ash producers are being asked to cooperate in the 1979 Survey on Ash Collection & Utilization sponsored jointly by the Edison Electric Institute and the National Ash Association.

NAA Director Jim Covey said data forms are being prepared and will be placed in the mail to all known producers.

Recipients are being asked to include in-house applications as well as sales for outside projects to make the program as comprehensive as possible.

HERE & THERE

WEEKS JOINS MRI

ATLANTA—Monier Resources, Inc. has announced the appointment of James H. Weeks as Manager of the firm's Southern Region based here. He began his duties January 21.

Weeks will be responsible for MRI operations and activities in Georgia, Alabama, Mississippi, and selected areas in contiguous states.

The new regional manager joined MRI after many years' experience in the cement, fly ash, and concrete industries.

ASH BLOCK REEFS

STONEY BROOK, L.I.—Scientists at the Marine Sciences Research Center here are experimenting with the use of coal by-products to make building blocks for artificial sea fishing reefs.

Results with the cubic-foot size blocks made by fly ash and scrubber sludges in a reef in Conscience Bay on Long Island Sound indicate several kinds of bait fish as well as lobsters and crabs are flourishing on and around the reef.

In 1980, they plan to use bigger blocks to build a 10-foot high reef placed about 60-feet under water. The researchers hope that sea bass, blackfish, porgies, and flounder will be attracted to the artificial reef.

The project is being financed by a grant from the Electric Power Research Institute.

EVERBODY'S DOING IT

WASHINGTON—The Department of Energy has awarded a contract to Engineering-Sciences Companies of Arcadia, CA., to study the impact of the Resource Conservation & Recovery Act (RCRA) on coal-fired utilities.

According to a report in a recent issue of Environmental Science & Technology, the work will review the cost of disposal of both "hazardous and non-hazardous wastes." The cost comparisons being developed are based on 1977 and projected 1985 dollars.