ASH AT WORK

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RCRA Timetable

The EPA's implemention schedule to manage and control hazardous wastes, including coal by-products, has been set. Ash producers and users have until March 16 to comment on the proposed regs.

Under the court approved timetable the regs are to be finalized by the Federal agency on Dec. 31, 1979 and will be become effective July 1, 1980.

Like the air pollution control standards, the harsh "cradle to the grave regs" appear to be "billion dollar criteria based on a 25-cent data base."

The electric utility industry has enlisted the support and expertise of the National Ash Association to help draft its response and recommendations. Director John H. Faber is working closely with the Utility Solid Waste Activities Group (USWAG) on the formulation of a reply.

Fly ash, bottom ash, boiler slag, scrubber sludge have been placed in a "special" category along with cement kiln dust, mine refuse, gas and oil drilling muds, and production brines.

A footnote in regs indicate it is not known how much of the total quantity of coal ash "is, in fact, hazardous material."

The proposed new EPA guidelines are recorded in the Federal Register dated December 18, 1978. Get your copy today, review it, and be prepared to act or react.

Environmental impact needs to be balanced against economic considerations in establishing overall priorities. The answer is not in the courts, but in the enactment of practical, realistic, and attainable rules.

IN THIS ISSUE

71 Papers Selected

Atlanta Symposium Topics Are Set

WASHINGTON, D.C.—Seventy-one presentations are incorporated in the program for the Fifth International Ash Utilization Symposium to be held in Atlanta, GA, on February 25-27 at the Atlanta Hilton.

The schedule includes a Sunday program of special interest to the cement industry, a general session on Monday morning and two concurrent programs that afternoon, three separate all-day sessions on Tuesday.

Two luncheon speakers will deliver messages on environmental and legal guidelines.

Co-Chairman John H. Faber, who is coordinating the program, noted 19 papers have been accepted from foreign ash technologists in keeping with the international concept of the symposium.

Faber disclosed Atlanta Hilton officials would like to have room reservations by February 4. Overall attendance is expected to reach 450-500.

The co-chairman for the two-day event is William T. Wertman of the Morgantown Energy Research Center. He and NAA President James E. Davis, vice president-operations for Allegheny Power System, will participate in opening day ceremonies.

Session topics and chairmen, as listed on the enclosed program, are as follows: Session B—"Classification, Minerals Recovery, Product Development," Ronald E. Morrison, American Electric Service Corporation; Session C—"Environment, Ash Collection & Storage," Robert J. Collins, Valley Forge Laboratories; Session D—"Fly Ash in Cement and Concrete," Robert J. Morrison, Western Ash Company; Session E—"Geotechnical Applications-Roads and Structural Fills," William E. Morton, Highway Materials, Inc.; Session F—"Grouting and Land Reclamation," John P. Capp, U.S. Bureau of Mines.

The luncheons will feature Ms. Penelope Hansen of the Environmental Protection Agency who will discuss "Guidelines For Government Procurement of Waste By-Products" and George P. Graves of American Alloy Steel, Inc. whose topic is "Ash Liability in Cement Replacement.

Leon Trief of Belgium will review his cement making process incorporating high volumes of fly ash for representatives of cement industry at 5 p.m. on Sunday, Feb. 25. His remarks are titled "The Development of Trief Cement."

International presenters include delegates from the United Kingdom, Australia, Canada, India, Belgium, Saskatchewan, Yugoslavia, Romania, and the U.S.S.R. Co-Chairman Faber added 25 percent of the papers accepted had foreign authors.

(See ATLANTA, Page 2)

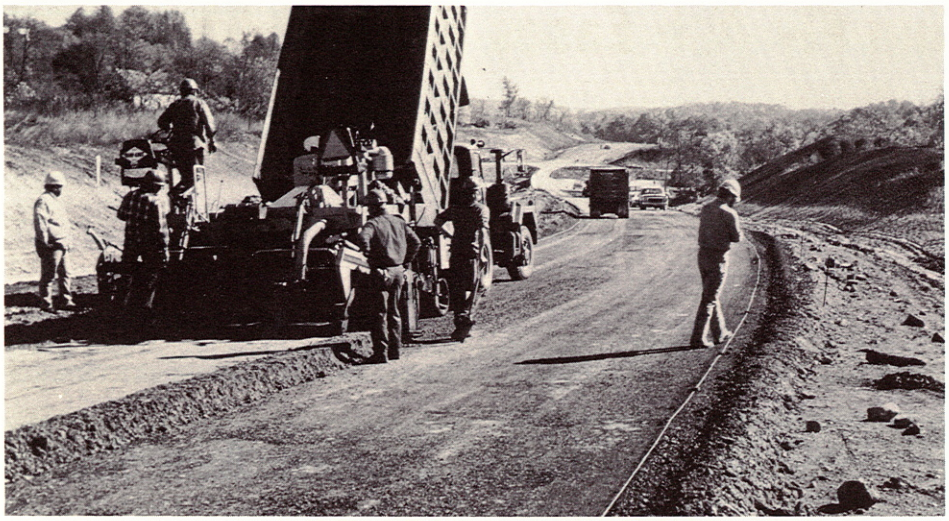
Short Course Set For LSU Campus in April

Plans are being finalized for staging a three-day Ash Short Course at Louisiana State University in Baton Rouge, La. on April 23-25, 1979.

The format will follow the pattern of similiar conferences held at West Virginia University, Texas A & M University, and Arizona State University and cover a wide range of subjects on power plant ash and its uses.

Attendance will be limited to 100 applicants. Coordinator Ara Arman, chairman of the Department of Civil Engineering at LSU, said the program will be of special interest to utility personnel, ash marketing agencies, construction, and drilling interests. ests.

The conference is being co-sponsored by the National Ash Association, the Civil Engineering Departments at WVU and LSU.



New basemix goes down

Ohio DOT Tests Ash/Fluidized Bed Basemix

BELLAIRE, OH—An experimental road base containing a fly ash/fluidized bed material mix was recently installed on a segment of Route 3 near here by the Ohio Department of Transportation.

The project involves the placement of three different six-inch formulations. The total length of the demonstration is 190 feet.

The mix design incorporated the use of natural Ohio aggregates, spent bed residues from fluidized units in Alliance and at Battelle Laboraties in Columbus, and ash from Ohio Edison's Berger Power Station. One section had 40% aggregate and 30% each of residue and ash and the other two used a blend of 75% aggregate, 15% bed material, and 10% ash.

The mixing was done in a conventional pugmill, was placed with an ashphalt paver or motor grader, and compacted with steel-wheeled and vibratory rollers. A bituminous overlay was put down over the basemixes. The work was done by crews from John Tonkovich & Son of Shadyside.

Field results favored the use of a spreader box behind a dump truck with final placement by the grader.

Monitoring will be done by the ODOT and Valley Forge Laboratires of Devon, PA, over the next 12 months. The average daily traffic volume over the test section will also be recorded, particularly its use by coal hauling trucks.

ODOT interest in the use of coal by-products in highway construction stemmed from earlier conferences with planning and staff personnel in Columbus. The first of these sessions, held under the auspices of the National Ash Association, was at Columbus in 1976.

The sessions were coordinated by R. E. Catlin, chief engineer of Planning & Design for ODOT and covered a wide range of subjects. Staff members from the Bureau of Construction, Bureau of Maintenance, Bureau of Tests, Bureau of Bridges, Bureau of Location and Design, Bureau of Research and Development participated in the conferences.

The ODOT has initiated two other projects as a result of these meetings. The first was the use of a fly ash embankment to support a bikeway in the Dayton area.

Inclement weather has halted work on the placement of a fly ash embankment around concrete bridge abutments at the intersection of State Routes 7 and 148 near Powhattan Point in Belmont County.

Crews from Tonkovich & Son have already placed 2,245.35 tons of fly ash at one end of the structure. The ash is coming from Ohio Edison's nearby Berger Station.

Atlanta Symposium . . .

(Continued from Page 1)

Registration fee for the symposium is $80 which covers pre-prints of the technical papers, a Sunday reception, continental breakfasts, two lunches, and all coffee breaks.

3 Utilities, Nine Others Join NAA

Twelve firms, including three electric utilities, have been accepted as new members in the National Ash Association, according Executive Director John H. Faber.

Utility voting privileges have been granted to Pennsylvania Power & Light Co. of Allentown, PA, Iowa Public Service Co. of Sioux, IA, and Consumers Power Co. of Jackson, MI.

Other new affiliates are Ash Management Systems, Inc. of Atlanta, GA, Industrial Technology, Inc. of New Haven, IN, Transit Mixed Concrete Co. of Azusa, CA, Kanawha Valley Fly Ash Co., Charleston, WV.

Environmental Site Developers, Inc. of Springfield, IL, Del Val, Inc. of Portland, OR, Stablex Corporation of Radnor, PA, Thomas Foundries, Inc. of Birmingham, AL, and Trinity Materials, Inc. of Hattiesburg, MS.

Designated board members from the ash producing utilities include C. E. Snyder, Manager—Fuel Purchasing & Transportation for PP & L; Russ Christiansen, Production Manager, Iowa Public Service; and R. C. Youngdahl, Consumers' executive vice president.

NAA President James E. Davis has named two in-house fact finding committees to address subjects of increasing importance in the day-to-day operation of the organization—membership and program staffing.

"The complexity of environmental concerns now facing the industry make it imperative that we be prepared to offer our membership greater technology and guidance," Davis noted.

Ronald E. Morrison of American Electric Power Service Corporation heads the group on "Membership and Top Management Liaison."

Arthur R. Stefanski of Niagara Mohawk Power Corporation is examining the NAA's "Program Budget and Staffing." A sub-committee in this area is working on the development of a manual on "Ash Utilization." Alex L. Huhmann of Public Service of New Jersey is directing this program.

BIG JOHN SAYS:

A full-scale ash management program will soon be mandated for all electric utilities operating coal-fired generating facilities.

Get The Facts . . . Join the N.A.A.!

ASU Short Course Told Fly Ash Eases Cement Shortage

TEMPE, AZ—Participants in the Ash Short Course held here on the campus of Arizona State University in November were advised the use of fly ash has enabled the oil industry to maintain drilling schedule during the current cement shortage in the Southwest.

The three-day conference attracted 94 persons. Topics discussed covered a wide range of subjects from production and availability to specific construction applications.

Dwight Smith, Cementing Coordinator for Halliburton Services, said the use of ash in cement grout mixes has made it possible to extend dwindling supplies of cement. The shortage began about 18 months ago and no let up is in sight.

"The increase in drilling activity to meet the nation's growing energy demands has been greatly assisted by the use of power plant ash," he stated.

Halliburton uses fly ash on a worldwide basis in cementing mix designs created for oil and gas industry. In some instances, deep wells have been cemented with mixtures of fly ash and hydrated lime together with an activator. The latter functions as a catalyst for setting in the annulus around the casing.

Other speakers on the program utilized case histories to document the fact that power plant ashes can be applied in a variety of uses and yield equal or better performance than traditional materials at an economical cost.

Data was also presented to indicate increased amounts of ash will be available in the Southwest by the mid-1980's as projected new coal-fired electric generating stations come on stream.

Utility producers were advised new EPA regulations will require the ash industry to prove they can develop, utilize, and manage environmentally acceptable systems for the storage and applications of these coal by-products.

Dr. Roger Seals, program coordinator and professor of Civil Engineering at West Virginia University, stated "a greater effort is needed to assist in developing comprehensive evaluation techniques which will allow us to predict rather than measure behavior."

The Ash Short Course was co-sponsored by WVU, Arizona State University, Engineers Testing Laboratories, Inc., and the National Ash Association.

ETL Vice President John C. Rosner directed the day-to-day activities and coordinated the registration.

Morrison Urges Stronger NAA Financial Support

Stronger financial support for the National Ash Association was one of the major recommendations of Robert J. Morrison, president of Western Ash Company, during a panel discussion on the subject of "What is Needed to Further Ash Utilization" at the Phoenix Ash Short Course.

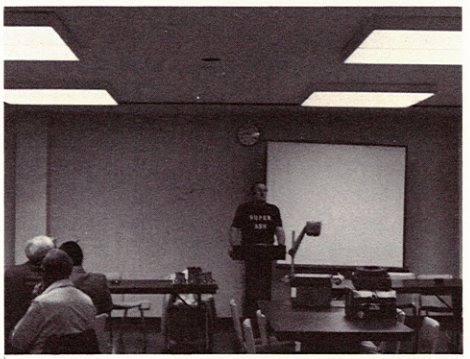
The president of the Arizona based firm noted "the NAA has done very well on a very limited budget" and added "distributors like Western should pay at least 10¢ per ton."

Morrison cited the need for expanded testing and research programs, institutional advertising, and media promotions.

He also urged utility ash producers to recognize the need for technical and professional sales efforts for coal by-products.

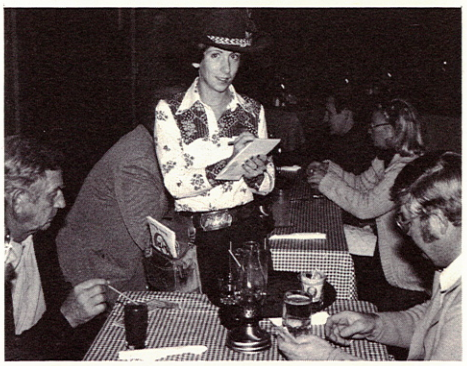
NAA Consultant Al Babcock stressed the need for the documentation of ash applications and the creation of a world-wide ash technology data center at the association's Washington offices.

Spreading the word



"Super Ash" Al Babcock

Out on the town



Your order please!

ASU class in session

Iowa DOT Project Eyes Fly Ash as Cement Replacement

BLENCOE, IA—The Iowa Department of Transportation is testing fly ash as an economical replacement for up to 15 percent of the cement in a six-inch concrete pavement on a five-mile segment of a county road near this Monona County community.

The DOT is monitoring the project to aid in the development of a specification permitting fly ash as an approved supplement. Twenty-eight day, six-month, and 18-month strengths will be noted and the post construction evaluation will continue for five years.

Chuck Huisman, head of Office of Materials, says projects are planned in other sections of state to further test the use of ash in highway construction.

Different ratios of fly ash used in four of the six sections on the Monona project. The other two were designated as control points and paved with conventional mix designs.

Ten percent of the portland cement was replaced on two sections with 1.5% fly ash being inserted in the mix for each 1% of cement taken out. A straight 15% ash replacement was used on a third section. The fourth also had 15% ash with a 1.5 to 1 percent replacement ratio.

Monona County Engineer Orville Ives stated he was confident that cost savings can be made without sacrificing strength, durability, or longevity of the pavement.

"In fact," Ives added, "I think we will end up with a better product that we had before."

"If it had all been fly ash, one mix rather than six, it would have gone for 0.20¢ a sq. yd. under all portland cement mixes," Ives said. "But add-ons were inevitable on this project because of equipment for the plant and other contingencies," he added.

Despite the add-ons, Ives termed the project cost about what "an all portland cement pavement would have cost."

Dick Pollard of Power Plant Aggregates of Iowa, whose firm supplied the ash for the Monona project, placed the potential cost savings at "$1-$2 a cu. yd. over a portland cement mix depending on the amount of fly ash used."

The 400 tons of fly ash used on the project came from Iowa Public Service's Port Neal Power Station in Sioux City located about 40-miles north of the job site.

Pollard stated the fly ash from Port Neal #3 Unit is a uniform ash that is very consistent and highly reactive.

The work was performed by crews from Irving F. Jensen Construction Co. using conventional paving equipment. The contractor used Agitor and dump trucks to haul the mix to site and placed the cement with a CMI Autograder or paver.

Feeding the CMI paver

The final touch

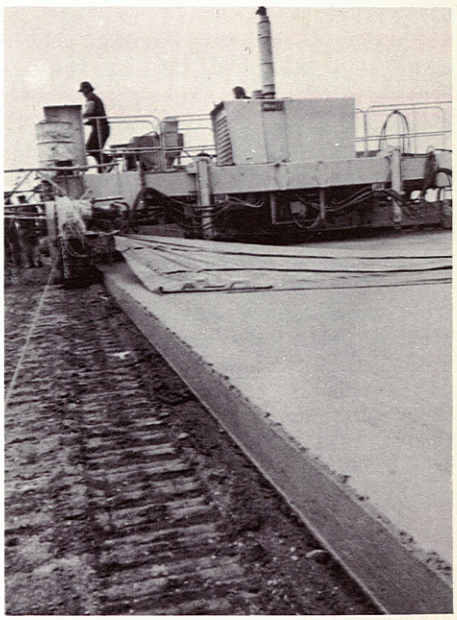
The Jensen crew said the mix "fell out of the trucks in sheer planes looking dry and hard to work." But after the mix was slipformed it was "easy to finish and gave us no edgeline problems."

Huisman added fly ash is "not really a substitute for portland cement, but more of a catalyst, a supplement which aids portland cement in the cementing process."

The DOT official said his major concern is the question of logistics and the quality variation of the ash.

From a design standpoint, the DOT is interested in the handling properties of the fly ash mixes, their strength and durability, and their ability to maintain consistent air entraining or slump control.

(Project data and photos supplied by MID-WEST CONTRACTOR)



No edgeline problems

Seminars Well Attended

NAA Director John H. Faber participated in December fly ash seminars in Mitchell, SD and Ames, IA.

The programs dealt with the basics of fly ash utilization in ready-mix concrete, concrete products, and concrete paving. They were sponsored by Power Plant Aggregates of Iowa and Contech, Inc.

Fifty-four registered at Mitchell and 179 attended the event on the University of Iowa campus.

PPA Executive Richard A. Pollard reported the use of fly ash will be on the program at both the South Dakota and Iowa ready-mix conventions in 1979.