NAA Conducts Ash Utilization Seminar For 32 PP&L Engineers

ALLENTOWN, PA—Thirty-two engineers on the staff of Pennsylvania Power & Light Company participated in an in-house Ash Seminar here presented by the National Ash Association designed to acquaint the utility personnel with ash utilization concepts and technology.

The one-day session introduced the NAA’s training program now available to assist member companies in coping with the problem areas facing the ash industry ranging from ash management, environmental concerns, applications, to marketing.

Executive Director Jim Covey reiterated the association’s services are available upon request. In fact, Michigan Foundation Company, Inc.—one of newest members has already requested aid in presenting a program for highway engineers in the Trenton, Mich. area.

Subjects covered at the PP & L seminar included use of ash in structural fills and embankments, highway and pavements, fly ash concrete, and other construction applications. A review of the utility’s Polymer Concrete Research concluded the program.

Clark Harrison, supervisor—ash marketing for PP & L, coordinated the program. Participating departments included construction, power plant engineering, fuel supply, power production, bulk power engineering, environmental management, engineering services, technology and energy assessment.

Staff personnel were encouraged to ask for ash to be used on in-house construction projects.

PP & L followed up the seminar with a feature story in its company magazine, “PP & L Reporter.” The story, titled “Turning Trash Into Treasure,” reviewed the company’s ash program and

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Seminar . . . (Continued from page 1) marketing potential for 1.5 million tons it produces annually.

The speakers emphasized the importance of managing these coal by-products as a resource and not a "waste material." PP & L’s marketing slogan is shown in the above insert.

Panelists included John Faber, consultant to the NAA; Dr. Roger K. Seals, chairman Department of Civil Engineering at Louisiana State University; Dennis L. Kinder, research engineer for American Electric Power Service Corporation; Mike Skydlowski, sales engineer for American Admixtures; Alan G. Richenbacher, senior project engineer for PP & L, and Co-ordinator Harrison.

C&SOE Becomes 8th AEP Operating Unit

COLUMBUS, OHIO—Columbus and Southern Ohio Electric Company is now the American Electric Power System’s eighth operating company and the acquisition added five coal-fired generating stations to AEP’s 15 major power plants located in seven eastern and mid-western states.

Additionally, AEP is completing the transfer of its corporate executive offices to Ohio’s capitol city. A total of 440 persons are involved in the relocation from New York City. The staff is being temporarily housed in the Borden Building while a new facility is erected in the downtown Columbus area.

Robert S. Hunter, executive vice president of AEP’s Service Corporation, will be the company’s senior officer in New York. He will continue to direct the system’s major construction program in addition to his new administrative duties.

The purchase was effected 12 years, three months, and 17 days after the two utilities announced their merger plans.

C & SOE’s major stations were identified as Conesville, Poston, Walnut, Picway and Stuart. The latter unit is jointly owned with the Cincinnati Gas & Electric Co. and Dayton Power & Light Co.


Charter Members . . . (Continued from page 1)

The six other members include Mid-Atlantic Ash Co., Salis., Md.; Abrasive Aggregates, Inc., Ft. Lauderdale, Fla.; MI Foundation Co., Inc., Tren., MI; Peabody Process Systems, Inc., Starn., CT; Sole Boneh, Ltd., Tel-Aviv, Israel; and SRI International, Menlo, Park, CA.

AEP Sets

Ash Use Review For ODOT Staff

COLUMBUS, OHIO—Seven ash industry representatives recently met with officials of the Ohio Department of Transportation to again review applications of power plant ash in highway construction.

The session was set by Dennis L. Kinder, a research engineer with American Electric Power Service Corp., and Russell Catlin, Executive Assistant to ODOT Director David L. Weir. Three earlier meetings, the first in 1976, were coordinated by the National Ash Association.

The presentation centered around a review of present uses of these coal by-products in highway applications and the availability of ash in Ohio. Thirty-six ash producing power stations were identified for ODOT officials.

Bob Smith of John Tonkovitch & Son, Inc. also described the placement of a fly ash embankment in Belmont County—Ohio’s first major use of ash on a road project. (See story on Page 3).
POWHATTAN POINT, OHIO—The first use of fly ash on a highway project in the State of Ohio has made believers out of the contractor and the Department of Transportation’s project supervisor.

The initial experience took place in an embankment around a concrete bridge over the Pennsylvania Railroad at the intersection of Routes 7 and 148 near here. Over 5,658 tons of ash were placed in the fill around the abutments.

To date the only other use of power plant ash by the DOT was on a bicycle path in the Dayton area which was also completed in the 1979 construction season.

Both the supervisor, Ron Baker, and Project Manager Clarence Arno were “leary of the material” when they started the fill but upon completion of the work were highly impressed with its “workability.” Sutton and Stewart, Inc. of Bridgeport were the general contractors.

The ash was supplied by John Tonkovich & Son from Ohio Edison’s Burger Station located about five miles north of the job site.

The fill started out about four feet below the railroad grade in a confined area that made compaction somewhat difficult. At the deepest point the ash embankment was 27 feet high and extended longitudinally about 80 feet. The ash was placed in six-inch lifts initially and as the width of the fill expanded the material was compacted in 12-inch lifts.

Arno described the fill area like “working in a 30-foot box.” “There was just no way we could have gotten compaction in an earthen fill in this situation without a lot of hand tamping,” he added.

The veteran contractor stated the amount of ash “worked out closer in planned quantity than any material we have ever used.” With soil you have to add 15 percent, Arno explained.

The DOT inspector confirmed the ash “didn’t demonstrate the shrinkage you would normally have with dirt or gravel.” Compaction attained 95% of standard proctor or 100 percent density.

The job specs called for the placement of two feet of 310 milli slag against the bridge abutment which had been coated with an asphalt preparation. Additionally, a celanese filter cloth (Mirafi) was placed between the slag and the fly ash for the full height of the fill.

The outslopes were covered with a soil cover as the fill was placed to minimize possible erosion and spillage on the railroad tracks. This was very important as it was necessary to maintain rail traffic at all times.

Arno also emphasized he had no “shut down time” while placing the ash. The contractor finished one side in mid-December and the other on March 16. “If the ash fluffed or dried out a little we simply ordered a wet load of ash which corrected the problem immediately,” Arno related in praising the cooperation of ash supplier.

However, Baker concluded he wouldn’t recommend ash placement in temperatures below 30 degrees because of “the problem of getting the ash out of the truck bed.”

Little or no settlement has been noted in the fill since the sub-base and wearing course was placed and the road opened to traffic last spring.
Massachusetts Is First Ash User In Northeast

NORTON, MASS.—Power plant bottom ash has received high marks thus far from Massachusetts highway officials here as a replacement for sand and gravel in the base layer of a section of John Scott boulevard.

The Boston Sunday Globe recently referred to the application as the first of its kind in the Northeast.

"The road isn’t open to traffic yet, but I think the ash experiment is going to work out pretty well," Highway Superintendent Carl Jacobs told reporter Bill Laberis.

"It hasn’t settled anymore than gravel would have and it stood up well to the frost last winter," he added.

Last August, crews placed 1,800 cubic yards of “gritty coal ash” from New England Power Company’s Bayton Power Station in Somerset on the road base.

The news article said the ash, under most circumstances, would have been hauled to the utility’s landfill in Freeport at a cost of $3.20 per ton. "Until recently," the story related, "the gray-black coal ash was a worthless waste with nowhere to go but back from where it came, deep down under as landfill."

In the lengthy story, Laberis used production and utilization figures supplied by the National Ash Association and cited the mineral extraction research now being carried out at the Oak Ridge National Laboratory in Tennessee.

The successful use of ash by the West Virginia Department of Highways in similar applications was also noted in the Laberis report.

He said, in part, "The inert, solid ash has already been used to replace sand and gravel in the base layer of literally hundreds of miles of roads in West Virginia. Tests conducted by the West Virginia Department of Highways have shown that coal ash has a strong bonding affinity for asphalt. Since 1972, the department paved more than 300 miles of country roads with a mixture of coal ash and emulsified asphalt called 'ASH-PHALT.'"

The story concluded "with stricter guidelines regarding the dumping of industrial wastes and with greater domestic coal consumption, the presence of million tons of coal ash could pose yet another costly disposal problem for power companies and heavy industry."

"A new technology which uses coal wastes is, however, emerging from the piles of ash born largely out of the economics of inflation."

Fire Fails To Halt Fly Ash Deliveries

CASON, TEXAS—Fly ash marketers are a hardy lot, particularly the Texans that operate Gifford-Hill’s fly ash plant here.

On Friday night, March 7, a drunken driver rammed his car through a locked steel gate at the plant and continued on several hundred feet before severing a power pole. The resultant fire totally destroyed the office and storage building, but by Monday morning it was "business as usual."

By Sunset on Saturday, Ash Products Manager Claude Brown, Plant Superintendent Woody Woodall, and Glen Womack—husband of Cason Secretary, Mickie Womack—had the debris cleared, the bottom ash filled in and leveled, and red telephone was on the bare ground about 50-feet from the charred automobile which had caused the fire. The power company had set two new poles and restored service as well.

On Sunday, a new portable building was delivered to the yard. And Calvin Hall, Mickie’s father, wired in the new electrical service. Woody’s wife, Nora, got into the act and showed up with some office furniture from home.

The scale people arrived on Monday. A Porta-Potty was also sited. And by week’s end, the dedicated crew had managed to ship 1,000 tons of fly ash.

Gifford-Hill & Company, Inc. is an active member of the National Ash Association. Claude K. Brown of Dallas, Texas, Manager Ash Products, has represented Gifford-Hill at many NAA sponsored symposia and technical meetings.

Covey’s Comments:

Ash management is not as easy as it sounds. Two of the basic corollaries to Murphy’s law aptly referring to the subject are that every solution breeds new problems and Nature always sides with the hidden flaw.

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