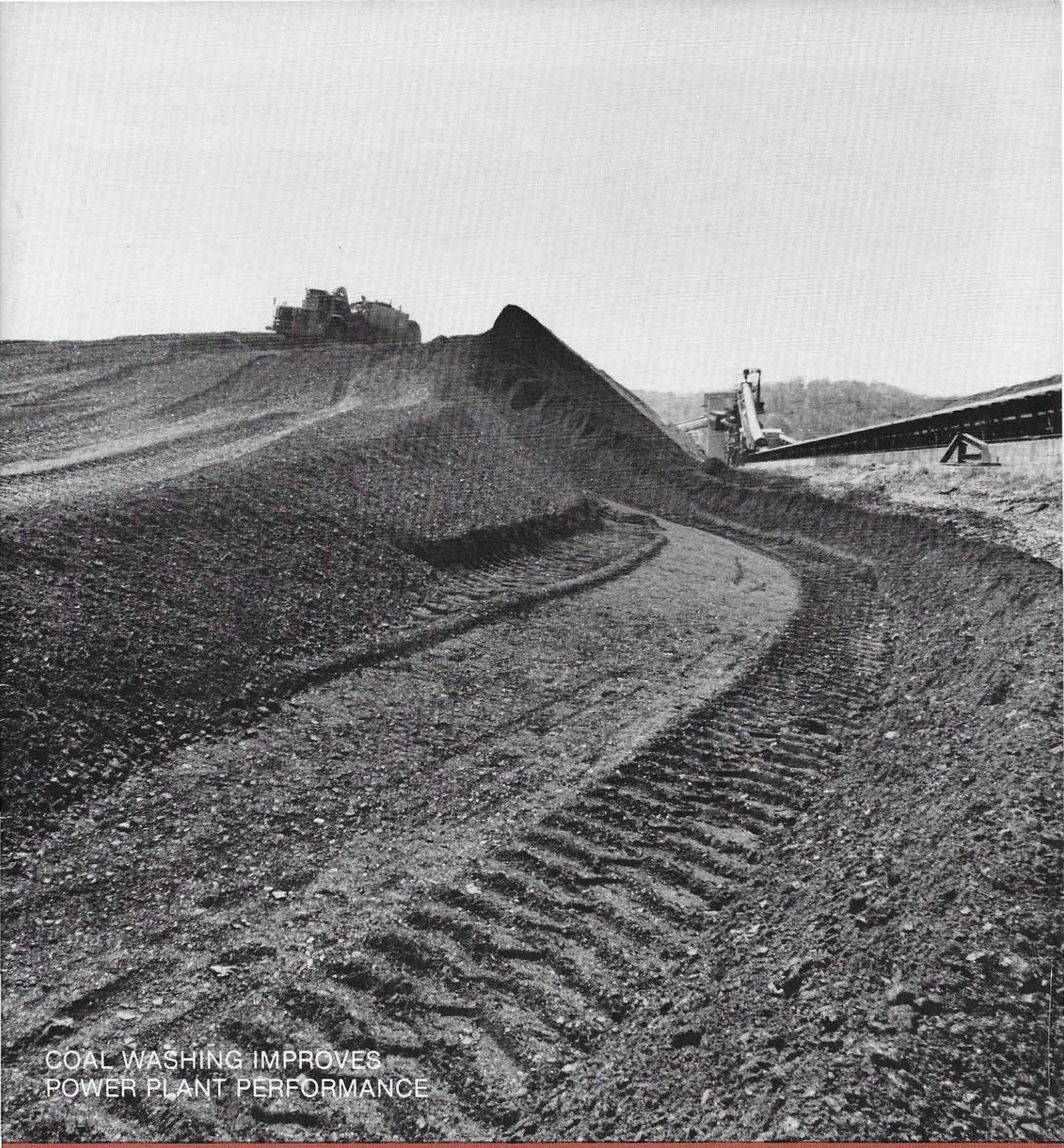

COAL WASHING IMPROVES
POWER PLANT PERFORMANCE

AUGUST 1981

THE ILLUMINATOR

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Volume 31 No. 11 August 1981

Published monthly for employees of Appalachian Power Company and Kingsport Power Company and their families.

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We are an Equal Opportunity employer.

Cover

Over 87 percent of the electricity produced by the AEP System is generated by coal. To find out how coal washing improves the operation of our power plants — thus continuing our efforts to generate electricity at the lowest possible cost — read the story on pages 14-15 of this issue.

Savings plan unit values

Date	Fixed Income Fund		Equity Fund		AEP Stock Fund	
	VPU	UCPD	VPU	UCPD	VPU	UCPD
1/31/81	$1.2907	.7748	$1.7132	.5837	$1.0145	.9857
2/28/81	1.3001	.7692	1.7508	.5712	.9748	1.0259
3/31/81	1.3106	.7630	1.8171	.5503	1.0064	.9936
4/30/81	1.3208	.7571	1.7770	.5627	.9912	1.0089
5/31/81	1.3317	.7509	1.7862	.5598	1.0340	.9671
6/30/81	1.3425	.7449	1.7768	.5628	1.0757	.9296

VPU — value per unit
UCPD — units credited per dollar

HOW TO READ THE ABOVE CHART: The first column lists the days on which unit values are figured; the second shows the market price or value of each unit on that day; and the third indicates how many units you could have bought for $1 on that day. For example, if the market value or "value per unit" of the Equity Fund were 50¢ on the valuation date (last day of each month), then "units credited per dollar" would be 2.000. This also holds true for the AEP Stock Fund and the Fixed Income Fund.

The variable interest rate for July on the Fixed Income Fund is 14.07%. All monies placed in this fund after April 1 will now be credited with an interest rate of 14.07%. □

White appointed to visitors board

W. S. White, Jr., chairman and chief executive officer of Appalachian and Kingsport Power Companies, last month was appointed a member of the Board of Visitors of Virginia Polytechnic Institute and State University, Blacksburg, Virginia, by Governor John Dalton.

White, a native of Norfolk County, Virginia, received his BS degree in electrical engineering from VPI in 1948. □

Painter finds lost wallet

Arnie Painter, summer utility worker at Amos Plant, had been on the job only four days when he found something Roger Plymale had been looking for for weeks — his wallet containing $450 in cash and a $150 check. Arnie discovered the wallet in the bunker room at Amos under some plastic and coal.

Roger, maintenance mechanic C, showed his appreciation by rewarding Arnie $50. Arnie, incidentally, is the son of Gary Painter, maintenance supervisor at Amos. □

Retiree directory offered

A directory listing the names and addresses of Appalachian and Kingsport Power Companies' retired employees is available. If you would like a copy of the directory, notify Betty Lou Carter, editor of publications, Appalachian Power Company, P. O. Box 2021, Roanoke, Virginia 24022. □

Help a customer and win a prize

The employee in each division with the most sign-ups for the Equal Payment Plan will win a prize to be selected from the Operations Improvement Catalog collection D. Some of the prizes in this catalog are shown above.

You could be a prize winner — simply by doing what we do best in Appalachian — helping our customers get the most out of their electric service. All you have to do is sign up your friends and neighbors for the Equal Payment Plan (EPP).

The company launched a contest August 1 to add 25,000 new members to EPP by January 31, 1982. Some 44,000 of our customers are now being billed on EPP, but there are still plenty of customers who could benefit. For example, the more than 100,000 all-electric residential customers not on EPP and the tens of thousands of air conditioning customers.

Everyone benefits with EPP. The customer benefits when he can pay the same amount each month for electricity even though his usage fluctuates according to changing season.

The company benefits because we will be getting fewer high bill complaints during times of extreme weather. And, hopefully, there will be fewer late payments of bills, which will cut down on paperwork and employees' time. Also, we'll have revenues coming in on a steadier basis.

You'll benefit when you earn some nice awards for yourself and your family.

All employees are eligible to participate in the contest. Employees in power plants and General Office departments will be assigned to the division in which they are physically located.

Each month, two prizes will be awarded in each division. First, the employee with the most sign-ups for EPP in each division will win a prize to be selected from the Operations Improvement Catalog collection D. Then your name goes in a pool for each customer you sign up for the EPP. At the end of each month, a winner will be drawn to pick an award from the catalog. You can win this drawing as often as your name is picked.

Counting the 9 draw winners and the 9 prizes for the most monthly sign-ups, there are 108 prizes in all. You can win up to 7 of them.

In addition, a grand prize winner's name will be drawn from the names of the 54 monthly winners. Details on the grand prize will be revealed later — but it will be worth waiting for — and winning.

Prospect cards and more detailed instructions on how the contest works will be provided to each employee right away.

DiLorenzo, Beam, Burton elevated

DiLorenzo

Beam

Burton

The Board of Directors of the American Electric Power Service Corporation elected two vice presidents, effective August 1.

John F. DiLorenzo, Jr., Columbus, was elected vice president and associate general counsel, and Bruce A. Beam, Washington, was elected vice president — governmental affairs.

At the same time, the board elevated John R. Burton to the new post of vice president and deputy general counsel. He had been vice president and associate general counsel. Burton will continue as secretary of the Service Corporation.

DiLorenzo will return to the Legal Department after serving as executive assistant to the president and as assistant vice president of the AEP Service Corporation. He will continue as assistant secretary of both the Service Corporation and its parent, American Electric Power Co., Inc.

DiLorenzo joined AEP as an attorney in 1968, was named administrative assistant to the vice chairman in 1971, returned to the Legal Department as assistant general counsel in 1974 and was appointed to his present position in 1979. He was elected assistant secretary of the Service Corporation in 1974 and of AEP in 1977, then assistant vice president of the Service Corporation in 1978.

Beam began his AEP System career in 1964 with Appalachian Power Company, one of eight operating utilities in the AEP System in Roanoke, Virginia, serving as tax counsel and senior attorney. He was transferred to the Service Corporation in 1978 and named director — governmental affairs. □

APCo to begin surveying for Jackson's Ferry-Axton 765 kv line

Appalachian Power Company is taking steps immediately to begin the field surveying necessary for the design of the 72-mile, 765-kv transmission line extending from its Jackson's Ferry Station in Wythe County to a new station to be constructed near Axton, Virginia.

The last regulatory requirement was cleared when the company was advised on July 23 the National Park Service would grant the permit for this line to cross the Blue Ridge Parkway near mile post 160.

In making the announcement, John W. Vaughan, president of Appalachian, said, "We are taking this initial step as quickly as possible to construct this much needed facility to improve the power supply to the rapidly developing Danville-Martinsville area and to enhance the reliability of the bulk power supply for the entire eastern portion of Appalachian's Virginia territory. The granting of the crossing permit was the last step in the regulatory process that began in March 1974, more than seven years ago."

Survey crews will shortly begin working in Henry County. The line route is located in the counties of Wythe, Carroll, Floyd, Franklin, and Henry.

Vaughan said, "The survey will be followed by line design, right-of-way acquisition and the placing of material orders. Actual construction could begin by late 1982. With no further obstacles the project should be completed by late 1984."

Vaughan noted that the long regulatory delays have caused the estimated cost of the project to more than double.

"Originally the cost of the 72-mile line was estimated at $25-million, the present estimate for the line is $48-million.

The Axton station and other facilities to be constructed at Jackson's Ferry were expected to cost about $18-million and that estimate has now risen to more than $37-million."

Vaughan briefly reviewed the regulatory process:

In March 1974, Appalachian filed the first portion of its application to construct the line with the Virginia State Corporation Commission. After a public hearing, the SCC found that there was a need for a 765-kv line and issued an order in July 1974. Shortly thereafter, the company filed the second portion of its application dealing with the route of the line. After public hearings in several locations the State Corporation Commission issued an order approving the proposed corridor and repeated its findings that the line was needed, in January 1978. In October 1979 the Commission gave final approval to the route.

Subsequently a group from Floyd County appealed the SCC decision on the line route to the Virginia State Supreme Court. The Court upheld the SCC decision.

It was also in January 1978 that the company filed an application with the National Park Service for a permit to cross the Blue Ridge Parkway. The NPS required an environmental assessment, a draft environmental impact statement and finally an environmental impact statement before it would act on the permit application. Public comment periods followed each of these actions. The Park Service announced on July 23, 1981 that it would grant the permit. □

AEP, APCo hit new summer peaks

The AEP System has a new, higher-than-anticipated summer peak for its internal load.

Its 2.5-million retail customers on July 9, for the second time this season, hit a new internal peak of 13,803,000 kilowatts. It exceeded the previous (June 15) summer peak by 115,000 kw and the System Planning Department's forecast by 49,000 kw. The latter, in fact, had been predicted for August.

The AEP System, being a winter-peaking utility, set its all-time internal peak of 15,141,000 kw last January 12. Its all-time total peak, which includes sales to both retail and wholesale customers, was established at 20,762,000 kw on January 12, 1981.

Customers of Appalachian Power set a new all-time high in use of electricity for a one hour summer period at 3 PM July 27. The new peak of 4,089,000 kilowatts exceeds by about 1% the summer peak demand set last August 11.

High temperatures were largely responsible for the new peak loads, which came at a time when industry had been experiencing cutbacks and some coal mines had been shut down for vacations. □

AEP 12-month operating revenues exceed $4-billion

American Electric Power Company's 12-month operating revenues exceeded the $4 billion milestone for the first time in the period that ended June 30.

Revenues were $4.07 billion in the 12 months ended June 30, and an increase of 16.9 percent over revenues of $3.48 billion (restated for rate refunds) in the comparable period in 1980.

It took AEP 66 years, to 1972, to achieve $1 billion in 12-month revenues, but only another four years to reach $2 billion, in 1976, only three years to reach $3 billion, in 1979, and only two for $4 billion, in 1981. (All of the figures include the revenues of Columbus and Southern Ohio Electric Company as if it were part of the AEP System for the entire period.) □

New service awards available in 1982

Employees throughout the AEP System scheduled to receive service awards beginning in 1982 will have a whole new variety of awards from which to choose.

In addition to the jewelry items available in the past, new gifts of commensurate value — such as desk sets, clocks and pewter, walnut and crystal ware — will be offered in an expansion of the service award program. Also, the value and number of gift items from which an employee may make a selection will increase as his or her years of service increase. The use of rubies inset in the jewelry items to designate five, 10 and 15 years' service and of diamonds for 20 or more years' service will be continued.

Employees scheduled to receive service awards this year have already made their selections of the jewelry items. Those scheduled for awards next year will be mailed brochures within a few weeks.

The service award program recognizes service with the AEP System at five-year intervals. In 1980 over 4,500 such awards, valued at over $300,000, were presented to employees. Interestingly, the same number of awards — 406 — was made for veterans of 25 and 30 years' service. The other totals were: 5-year awards, 1,739; 10-year awards, 646; 15-year awards, 720; 20-year awards, 153; 35-year awards, 349; 40-year awards, 74, and 45-year awards, 14. □

These items will be offered in an expansion of the service award program.

APCo folks show "we care"

Once again, Appalachian Power folks have shown that "we care" about those less fortunate.

Last winter a social worker contacted Appalachian's Charleston office about providing electric service to a 150-year-old log cabin located in a remote section near Pocatalico, West Virginia. The cabin, devoid of any modern conveniences, was the only home that 78-year-old Oran Pritt and his 79-year-old bedfast sister had ever known. Except for a friend bringing in an occasional meal, Pritt took complete care of his sister, cooking on a kerosene stove and hauling in water to scrub clothes on a washboard.

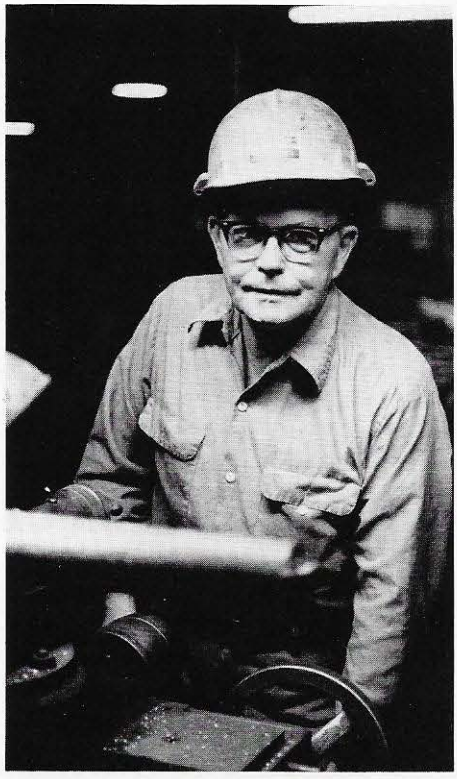
Oran Pritt

Winter delayed the building of a line to serve the cabin but, meanwhile, Charleston employees were informed of the Pritts' plight at a safety meeting. Bill Bostic, engineering technician senior; Kenny Estep, line crew supervisor; Felix Porter, line crew supervisor; and Jack Shaver, administrative assistant, formed a committee to determine what needed to be done to help the Pritts. Porter; Lawrence Jennings, line mechanic A; and Jim Parsley, line mechanic C, wired the cabin on their own time and the committee located a small refrigerator and electric wringer washer. Charleston employees contributed toward the purchase of the two appliances, but a Goodwill employee inadvertently sold the washer, which was being kept at the store until the cabin was ready, so the committee is still looking for a replacement.

The sister died during the winter, and Pritt now lives alone in the cabin, with only his dog for company. But he says he is "pleased that I can flip on the light and don't have to stumble over everything trying to light a kerosene lamp to take my medicine. I can leave that light on all night if I want to." □

A crew headed by Delt Crozier (right), line crew supervisor, constructed the new distribution line to Pritt's log cabin. Crew members are Bob Watson and Burl Miller, line mechanics A; Jerry Corder, line mechanic B; Scott Brogan, line mechanic C; and Bruce Burns, line mechanic D.

Tommy ends 40-year career



Graham

On August 1, Thomas Alexander Graham carried out his long-standing plan to retire early, only at age 63 instead of 62 as he had originally thought.

Tommy, a maintenance mechanic C at Kanawha River Plant, began his career as a laborer at Cabin Creek Plant in 1940. "I remember the first day I worked for Henry Skaggs (now deceased) in boiler repair. At that time laborers were really helpers. We were called the repair gang. We didn't know from one day to the next who we were going to work for. Up until about '70, I worked in what is called boiler maintenance. Then I worked as a master maintenance man in the machine shop until I came over here to Kanawha in 1978 when Cabin Creek closed.

"My wife is a laboratory technician for the company doctor at Cabin Creek, and she will continue to work. I figure she will keep me pretty busy around the house for a while. I'd like to set up a little shop at my house. I have the building, but I don't know when I will ever get started.

"I plan on fishing some and start back hunting again. We will probably do a little traveling, too. Kathryn is from Pennsylvania and New York so we have people there to visit and also some in Florida, Texas and South Carolina. Two of our children live in Huntington and one in Charleston."

Tommy twice served as commander of an American Legion post before it moved to another town and is presently a trustee and usher at the First Baptist Church in Chelyan. □

Curt found steady work at Kanawha

"I was looking for a steady job when I came here to Kanawha from the coal company," says Charles Curtis Murrill, "and sometimes I tell my wife it has been a little too steady. I remember that when the plant was first put into operation we put in a lot of overtime getting the bugs out of it. And we spend a lot of time here when we are in long outages."

All that is behind Curt as of August 1, when he retired from Kanawha River Plant as a maintenance mechanic B. He says, "There is a lot of work I have to catch up on around the house. I sing baritone with the West Virginia Couriers gospel quartet, and now I won't have to worry about whether I am going to have to work on weekends. Most of the time we are busy on Saturday night, Sunday morning and Sunday night." Curt and his wife attend the Chelyan Church of the Nazarene, where he has been a member for over 50 years. His wife teaches an adult Bible class.

"I also have an ammunition reloading shop in my garage that I work in in my spare time, especially around hunting season."

One thing Curt does not plan to do is travel. His daughter Charlene is married and lives in Los Angeles. His son Chuck works for the Charleston post office and is still at home. And his wife Edna, an LPN, says she doesn't plan to retire but wants to work as long as she is able because she really likes her job.

Curt adds, "I have made a good living here at the plant and have been satisfied. I came to work for $1.68 an hour and there has been quite an improvement in wages since I started. There has also been a lot of improvement in benefits, too. I just wish we had had the employee savings plan a long time ago.

"It will seem strange for a while not coming to work. You are with the same group most of your waking hours, and I will miss them. But since I am nearby, I can come over and see them when I want to."

Curt retired from the Naval Reserve as a senior chief radio man in 1979 after almost 40 years' service. He was on active duty from 1939 through 1945 and again for two years during the Korean Conflict. □

Murrill

Appalachian has leading role in aerial spraying innovations

When you keep your sights set on a goal and chip away at it over a long period of time, sometimes you're surprised when you step back and see the progress you've made.

That's an observation that Hank Colwell, Appalachian's forestry control and utilization superintendent, made as he compared today's aerial rights-of-way vegetation management program with that of 30 years ago. Appalachian's 1981 aerial spray program began last month and will continue at least through September.

"We first started using helicopters to apply herbicides on rights-of-way on a limited basis in the early 1950's," Hank reports. "We had only begun using herbicides in ground spraying operations in the late 1940's and aerial application was a natural, though giant, step forward. Before that, clearing distribution and transmission line rights-of-way of vegetation that could grow into conductors and short out lines was a hand operation."

Appalachian and American Electric Power people are always seeking better and less costly ways to bring electricity to customers and aerial spraying offers a host of such benefits, as well as provides a significant reduction in safety hazards, Hank explains. But Appalachian recognized that early-day equipment and methods left much to be desired. Consequently, from the very beginning the company has been among the leaders in seeking and finding better ways of getting the job done.

"Our leadership role is evidenced by the improved herbicide mixtures we've helped create, but our most significant contributions to the state of the art have been in promoting the development of better spraying equipment," Hank explains.

Innovations

One of the first aerial spray innovations with which Appalachian people were involved was a spray disc for applying herbicides to rights-of-way. Much of the development work on this device was conducted in the Lynchburg (Va.) area by the inventor and Appalachian people, especially Charlie Ross, assistant to the forestry control and utilization superintendent. This disc was in use for many years throughout the United States and was used in Appalachian until 1972.

"While the spray disc was better than anything else available at the time, it still didn't provide the tight control and effectiveness we needed. Even after the much improved 'microfoil boom' came out in the mid-1960's, the herbicide was often effective only on the top layer of the vegetation sprayed and drift control could not be assured above 100-feet. This limited our aerial spraying with the microfoil boom to distribution lines and some sub-transmission lines," Hank says.

"Because of this handicap, we approached the company that invented the earlier spray devices and urged them to develop for us an even more effective means of applying herbicides by helicopter," Hank explains. "The result was the '.060 nozzle' for use on the microfoil boom."

The .060 nozzle — named for the nozzle's aperture and nicknamed the "hayrack" from its resemblance to that farm implement — produces a large uniform droplet which gives maximum drift control and which shatters when it hits the top canopy of brush. This shattering allows part of the herbicide to remain on the top third of the canopy while the remaining spray falls through to the brush below.

"This nozzle produces drops heavy enough to fall from up to 300 or 400 feet without drift. The increased penetration through the brush also adds years to the time required between applications," Hank said. "Before we had this nozzle, brush control was about 60 to 75 percent. Now we can expect over 90 percent."

Hank points out that with the old devices, the average length of time between herbicide application was three years. Using the .060 nozzle and modern herbicides, repeat spraying is required only every six to eight years.

"While some other factors have also had an effect, primarily thanks to

Looking over a map of the lines to be aerially sprayed are, from left, Dan Sayers, r/w maintenance coordinator senior, GO T&D, Bluefield; Stuart Shinault, Bluefield r/w maintenance inspector; Phil Brainerd, Summit Helicopter, Inc., pilot; and John Danley, Bluefield r/w maintenance inspector.

these herbicides and the nozzle, we have reduced the area to be aerially sprayed annually from about 25,000 acres to the approximately 7,000 acres we have aerially sprayed each of the past two years," he recalls.

There have been other improvements over the years, Hank says. Early helicopters carried only 75 to 100 gallons of herbicide at a time. Today they carry up to 250 gallons, significantly reducing the time "lost" to refilling tanks.

Herbicides

"All chemicals used by Appalachian have been approved and registered by the U.S. Environmental Protection Agency and appropriate state agencies," Hank emphasizes. "They were selected because of their safety and effectiveness in controlling taller growing brush and they have been tested over a period of years by chemical companies, colleges, and governmental and independent research laboratories."

According to Hank, six chemicals are primarily used by Appalachian's contractors to control brush on rights-of-way. "Most of these are also used extensively by farmers, gardeners, and homeowners on crops and lawns," he said, adding that one is so lacking in toxicity that it is not even classed as a herbicide.

The herbicides used by Appalachian's contractors are: 2,4-D (2,4 Dichlorophenoxy-acetic acid), 2,4-DP (Dichlorophenoxyproponic acid), and Banvel (Dicamba), which are primary ingredients in the numerous lawn care products used in the U.S. They are effective in the removal of broad leaf plants from the rights-of-way by upsetting the hormonal balance of the affected plants. They, in effect, cause the plants to grow themselves to death.

Another is Triclopyr, or Garlon, (3,5,6 — Tricholoro-2-pyridiny-loxyacetic acid), which also upsets the hormonal balance of affected plants. It is used to control broad leaf, woody stem plants, principally ash.

The herbicide picloram (4-amino-3,5,6 trichloropicolinic acid) is more commonly known by its trade name, Tordon. According to Hank, picloram is "translocated" through the root system and the foilage and is effective against conifers and certain plants that spread from the roots of host plants.

Finally, he says, there is Krenite (ammonium ethyl carbamoylphosphonate) which is technically not classed as a herbicide. Krenite is used late in the growing season so that it can encapsulate the plant's buds and prevent them from coming out the next spring. This chemical is really a brush control agent, and creates little or no brown out.

"As I mentioned, all of the herbicides are registered with the EPA. What this means is that the herbicide will perform as indicated on its label . . . it will do what it says it'll do . . . and it's safe for man to use and for domestic animals. Additionally, it will not cause an unreasonable adverse effect on the environment and it is safe to wildlife when used according to label directions.

Guidelines

"Nevertheless," Hank says, "we take all kinds of special precautions to keep herbicides away from people and livestock as well as crops, water sources, and other sensitive areas. We very carefully follow strict guidelines about how close to them we allow our contractors to spray."

In addition, Hank explains, there are several restrictions on when herbicides can be sprayed by helicopters.

"We postpone spraying if the wind exceeds five miles per hour to eliminate any possibility of damage outside of the right-of-way, and we never spray when a weather inversion or other atmospheric condition can cause air stagnation. We also do not spray in the rain or even when the probability of rain is high, as well as in certain other circumstances."

Hank reports that the special precautions begin before the contractors' pilots even arrive in the area to be sprayed.

"The pilot's first stop is to see the division right-of-way maintenance inspector and to review the division's spray program as well as restrictions, sensitive areas, and other pertinent information," Hank says. "The inspector then works with the pilot to ensure that herbicides are properly mixed, the coverage width and volume applied is correct and everything else is ready.

"Before an area is sprayed, the pilot overflies it to check for water or other restrictions. And, all of this is monitored by our right-of-way maintenance inspector."

Appalachian was instrumental in the development of the .060 nozzle for use on the microfoil boom, as shown in this close-up photo of a helicopter used for spraying.

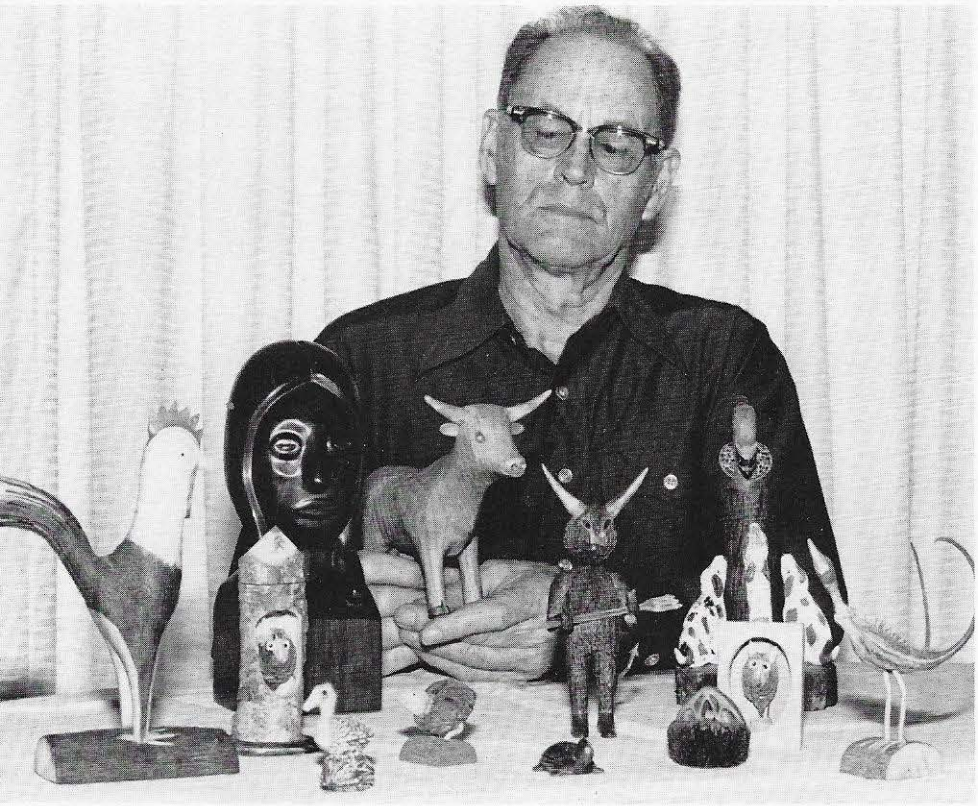
This year Appalachian will have up to six helicopters working on its right-of-way. They will come from two contractors, Evergreen Helicopters, Inc., and Summit Helicopters, Hank reports.

"Another important advantage herbicides have over hand clearing is that with each application, a longer period between applications is possible. Also, the herbicide is selective and eventually leaves long-stemmed grasses and resistant vegetation," Hank points out. "Furthermore, in hand clearing, the normal dangers from cutting tools, tree climbing and related activities are ever-present.

"Over the years, we've put a lot of thought, time, and effort into our aerial spray program," Hank says. "We've had a good incentive — saving money! This is obvious when you consider that applying herbicides on the ground costs our company two to three times what we pay for aerial applications and cutting is four to five times as expensive — up to 20 times as expensive in some inaccessible areas — and the results are not nearly as effective.

"Anytime you can do a job faster, better, and safer you've got to be doing something right. And when it comes to our aerial spray program, I think we are," Hank concludes. □

Whittling away his retirement



His wife calls it 'using up nervous energy'. He calls it 'doing things with my hands'. But no matter how you describe it, Curtis Delp can take things most people throw away and carve them into something decorative.

Curtis claims, "One reason I retired early is because I had always wanted to use my hands". And in the 14 years since his retirement as a maintenance man at the Byllesby Hydro in Pulaski Division, he has done just that.

Curtis adds, however, that he has always enjoyed whittling, an art in which he is self-taught and something no other member of his family can do.

"One of the first things I made was this devil," he points out. "I picked up a walnut and started carving on it and said 'that looks like the devil'. I made the body out of white pine; and, since the devil is supposed to have horns, I took some rooster spurs and put them on his head. I carved a pitch fork out of a tooth brush handle, and I used a pipe cleaner with a spear on the end as his tail."

Curtis continues, "Another time I had a piece of cherry that I was going to make Vela a candleholder out of. She said she didn't want one, so I was wondering what I could make out of it. I saw a picture of old Sitting Bull in the ***National Geographic*** magazine so I decided to carve him out of that piece of wood."

Other pieces of his handicraft include a snack tray in a leaf design, a dough tray carved out of white pine, a trio of dogs and a treed coon carved out of poplar, a smoking stand made out of three kinds of wood, and a cameo carved out of a hog tusk. "I made the mounting for the cameo out of a Monel nut. It won't tarnish and has high polish," Curtis says.

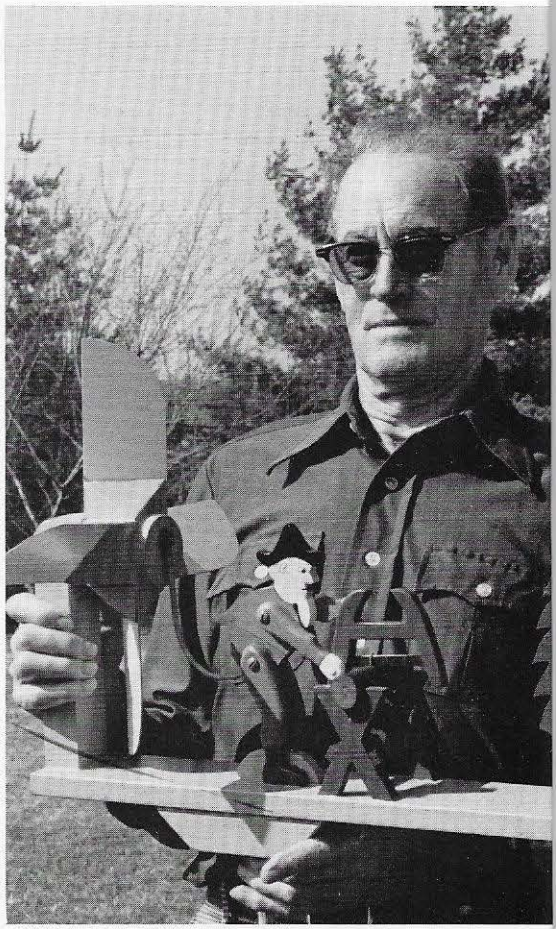
"I was down in the basement one day and saw some peach and plum seeds laying there. I picked them up and said, 'wonder what I can make with these?' That's how I got started making these little quail," Curtis said, picking up a box full of the little birds. "I made all these out of peach seeds this past winter." These have proved to be a popular item with tourists, and Curtis has made nearly $500 just from the sale of these small birds to a local craft shop in Galax, Roof Top of Virginia CAP.

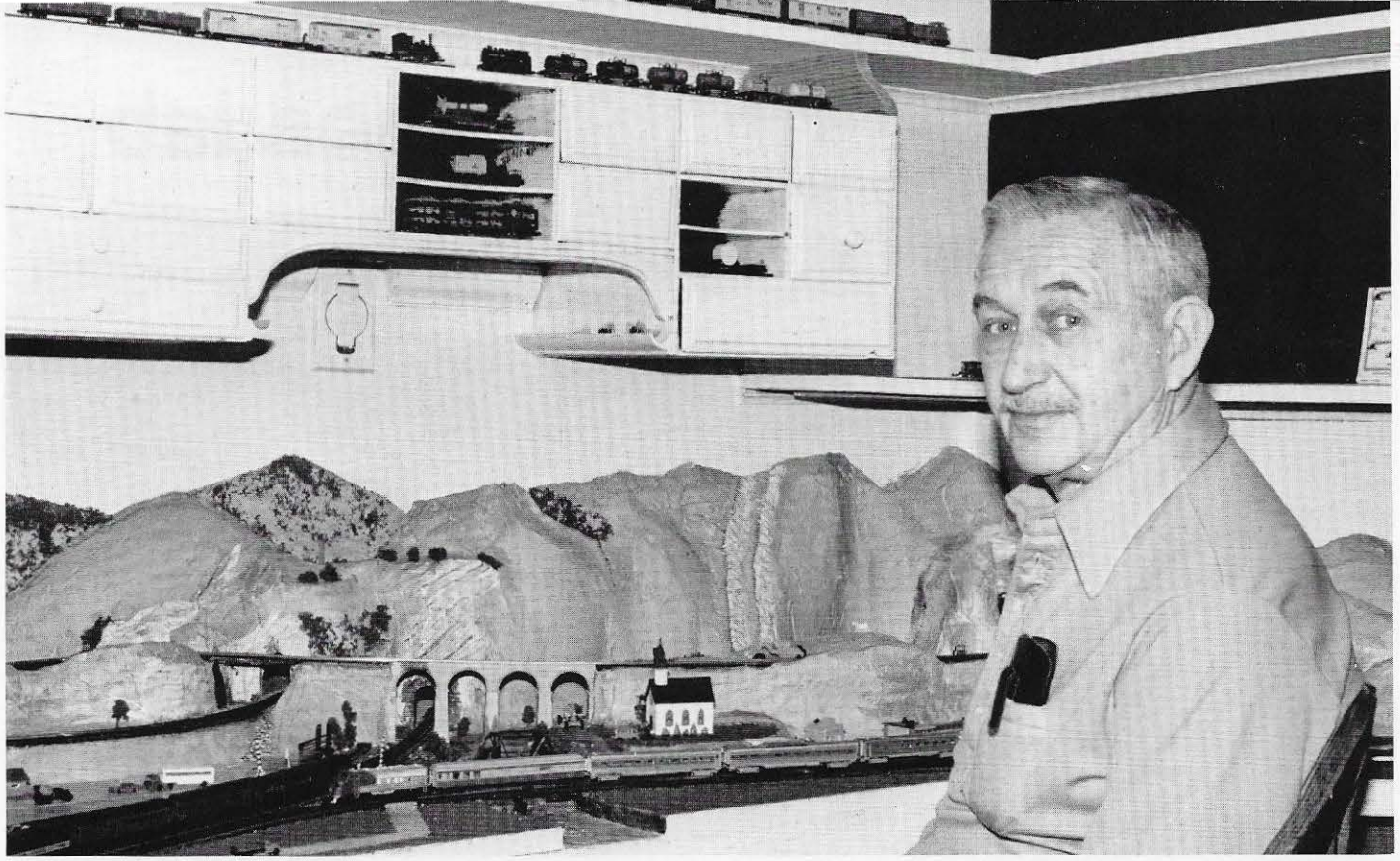
A look into the backyard of his home reveals another project — a little man sawing wood when the wind blows through the attached windmill.

His most recent venture is a cherry grandfather clock, which he built from scratch without a pattern. Curtis says, "Webb Halsey kept trying to get me to make one and said he would help me. He went with me to have the lumber dressed and then he marked it off and told me how to get started. The next day he came down and showed me how to put molding on the bottom, and from then on the rest of it is my design. I wouldn't take $1,000 for that clock now. There are 102 separate pieces of wood in that clock, and it took about 30 days to make."

When it comes to working with his hands, it seems there's no task too big or too small for Curtis Delp.

And, speaking of work, Curtis wants it known that he "really enjoyed working for the power company 39 years. I don't think anyone could work for a better company". □





I've been working on the railroad

Ask Arthur Stair, retired Kingsport residential services coordinator, what he's doing these days, and he could reply in all honesty, "I've been working on the railroad". Only Art works a couple of hours instead of "all the livelong day" as the old song goes, and the railroad is an N gauge instead of Norfolk and Western, Clinchfield or Southern.

"I was born in a house about 75 feet from the Southern railroad track in Gate City, Virginia, so I guess it's only natural that I've always liked trains," Art says. "Actually our house was the second one from the railroad station. The first train I remember riding, though, was to my grandfather's in Coeburn.

"As a kid, the only train I ever had was a windup; but, after I grew up and had a job, I started a layout with O gauge Lionel trains. By the time I entered service, I had three trains, a number of cars, and 110 feet of track. Then after the war, Clarence Bryan was looking for a train for his kids for Christmas and couldn't find one because they were scarce so I sold him one of mine in 1945.

"After I married (the daughter of a railroad conductor), I decided I was going back in the railroad business and changed from O gauge to HO gauge. In the layout I have now, I use N gauge. It looks like the older I get, the smaller the trains get." Art explains that O gauge is 31.76 mm between rails; HO is 16½ mm, and N is 9 mm. "An eight-wheel diesel engine is about the size of my thumb."

In a former home, Art had a train layout in the basement and another one in the attic. He recalls, "My attic was only four feet high — the house had a flat roof — and I could sit in the center and work as far as I could reach all the way around.

"Last summer after a heart attack and before I had heart surgery, there wasn't anything I could do except sit down, so I sat down and built a railroad layout for my grandson, Art III. It is almost an exact replica of one I had built for his father some 20 years ago. Even though my grandson is over here every day, he didn't know anything about it until Christmas."

Also last summer, Art began constructing a new railroad layout for himself. "Working on this layout is about the only thing I can do right now because of back problems, so I go downstairs and work on it about two hours a day. I don't have much else to do, and I won't watch soap operas," he laughs.

The new layout is constructed in a space first destined to be a closet. Art can sit in a chair and reach any part of the layout, and the engines and cars are housed on shelves above. An unusual feature of the layout is the mountain tunnels Art constructed against the back wall. The trains disappear inside one tunnel and reappear a few seconds later from another. (Art cleverly built a shelf on the other side of the wall for the trains to travel on.)

"Not counting what belongs to my grandson," Art says, "I have 7 engines and 41 pieces of rolling stock, including 8 passenger cars, an automobile carrier, freight cars that are built for hauling special loads, and 3 chemical tankers with Tennessee Eastman on them."

Art is always adding, rebuilding and remodeling whenever he gets a new idea. Right now he's working on a portable railroad layout. "I'm making it portable so I can take it next door to my grandson's house for him to play with, or I can operate it myself over here. To me, building a model railroad is a lot of fun." □

A look inside the Amos lab

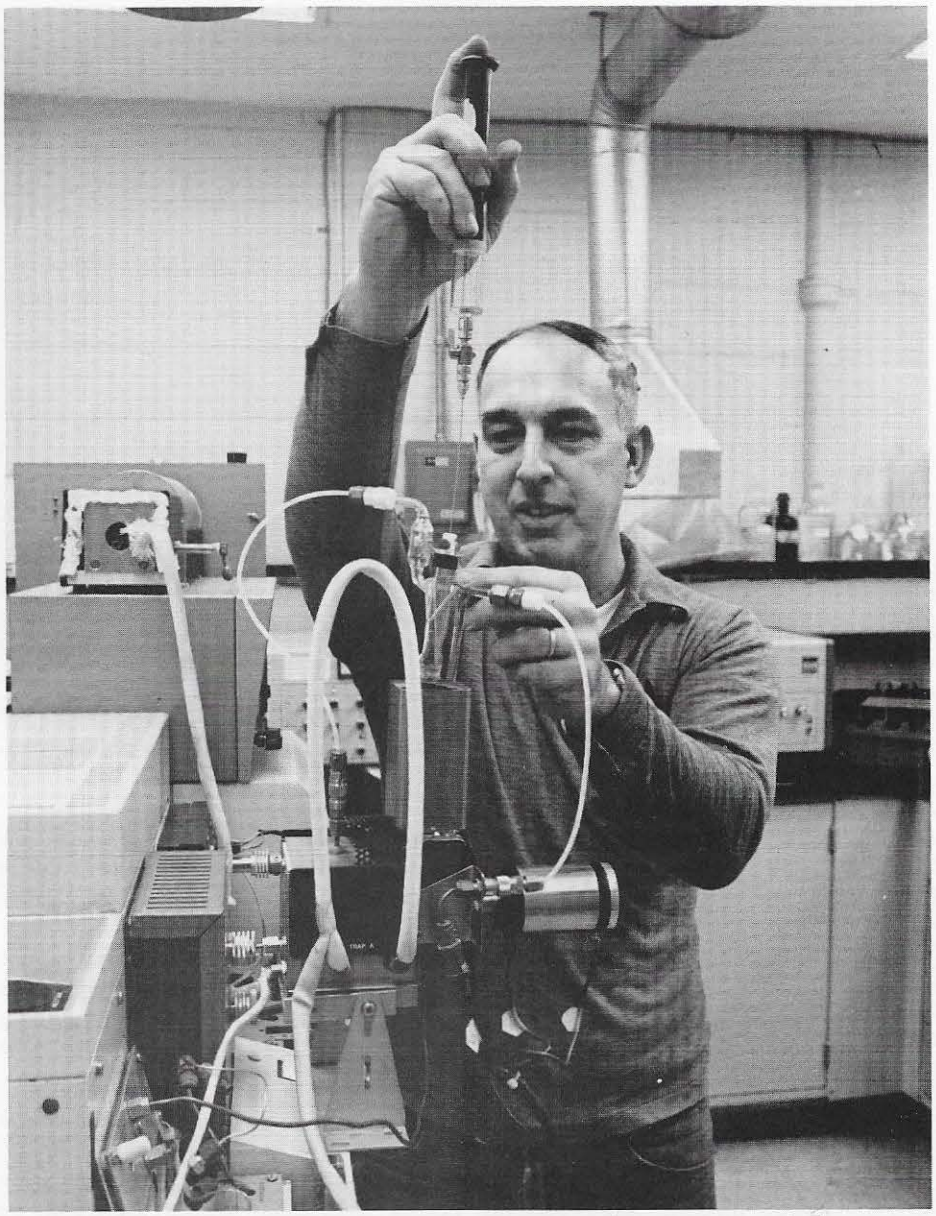
To the layman, the lab at John E. Amos Plant with its neatly arranged beakers, tubes, bottles, burners and complex testing equipment is a vision of organized confusion.

And the people who work here don't fit the lab worker stereotype so familiar to movie goers. In their jeans, sport shirts and, more often than not, hard hats, they are indistinguishable from the rest of the workforce.

"Actually," reports supervisor Thomas W. Worstell, "most of our people aren't really lab workers in the traditional sense. They work outside the laboratory performing a variety of monitoring, sampling, testing and other activities. Only three of our 17 people are 'lab technicians' per se."

According to Tom, the Amos chemistry section (as it's officially known) has three primary responsibilities.

It determines the quality of coal arriving by rail and barge, checking for such properties as Btu (heat) and sulfur content. The lab makes sure that air and water environmental standards are maintained, and it checks lubricants to reduce wear and tear on the plant's generating equipment.



Joe Harris, performance technician senior, injects a river water sample into a gas chromatograph. This test is for toxic chlorinated hydrocarbons and is part of the work conducted by Amos lab employees in behalf of the Ohio River Valley Water Sanitation Commission (ORSANCO).

Coal and water sampling

"We test samples of all coal arriving from our suppliers to make sure we are receiving the quality of coal we're paying for," Tom says.

Like coal, water is an important ingredient in creating steam with which to generate electricity, and the chemistry section at Amos keeps close tabs on several closed or semi-closed water cycles. Water is checked soon after it is taken from the Kanawha River and at each step of the way until it is discharged.

"We watch the feed-water condensate cycle water chemistry, for example, to make sure it does not contain impurities that could cause damage. Minerals or other impurities adhering to the surface of turbine blades can unbalance the rotor, impede the flow of steam and cause serious corrosion problems," Tom explains.

"To prevent this, water used in the steam-making process goes through demineralizers to strip it of all, or nearly all, contaminating metal, salts and minerals," he says. "Other processes make the water less corrosive and even scavenge the oxygen left in the water."

ORSANCO

The company "loans" three man-hours a day of technical labor to the Ohio River Valley Water Sanitation Commission (ORSANCO).

"This is a federally financed system to make sure drinking water taken from rivers is safe. Each day we take a sample of Kanawha River water and analyze it for chlorinated hydrocarbons. If there is a spill from a chemical plant upstream from us, we will find out and notify ORSANCO in Cincinnati. They can then warn affected cities so that water intakes can be closed off," Tom says.

Environmental obligations for Appalachian Power and other utilities have grown almost continuously during the past few years and the lab's responsibilities have kept pace.

"Our environmental package has reached the point where it requires two technicians and a supervisor full time, as well as about a third of a manager's time," Tom explains.

"Any time we remove water from the river and then discharge it back to the river, it must be even cleaner than it was when it arrived." Federal and state environmental guidelines concern such areas as solids, flows, acidity, alkalinity and temperature.

Air monitoring

"Another major environmental concern, of course, is air pollution and we maintain a network of five monitoring stations," Tom reports. Located in a 20-mile radius of the Amos Plant in various directions, these monitoring stations contain instruments to measure the sulfur dioxide content of the air and to check on other airborne particulate matter.

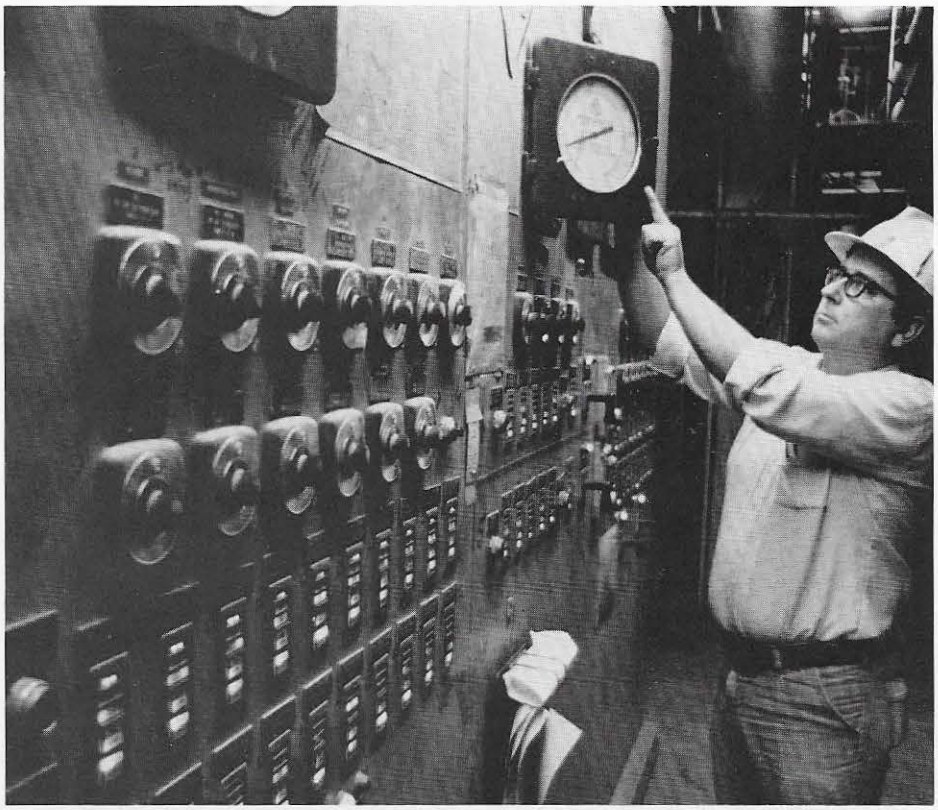
Lubricant analysis

"All of our moving equipment requires oil and grease and the abuse of continuous operation takes it toll on lubricants. An important part of our job is to analyze these petroleum products to make sure they are free of sludge, water and other contaminants. If they can't be removed by filters or centrifuge, the lubricants must be changed before damage results."

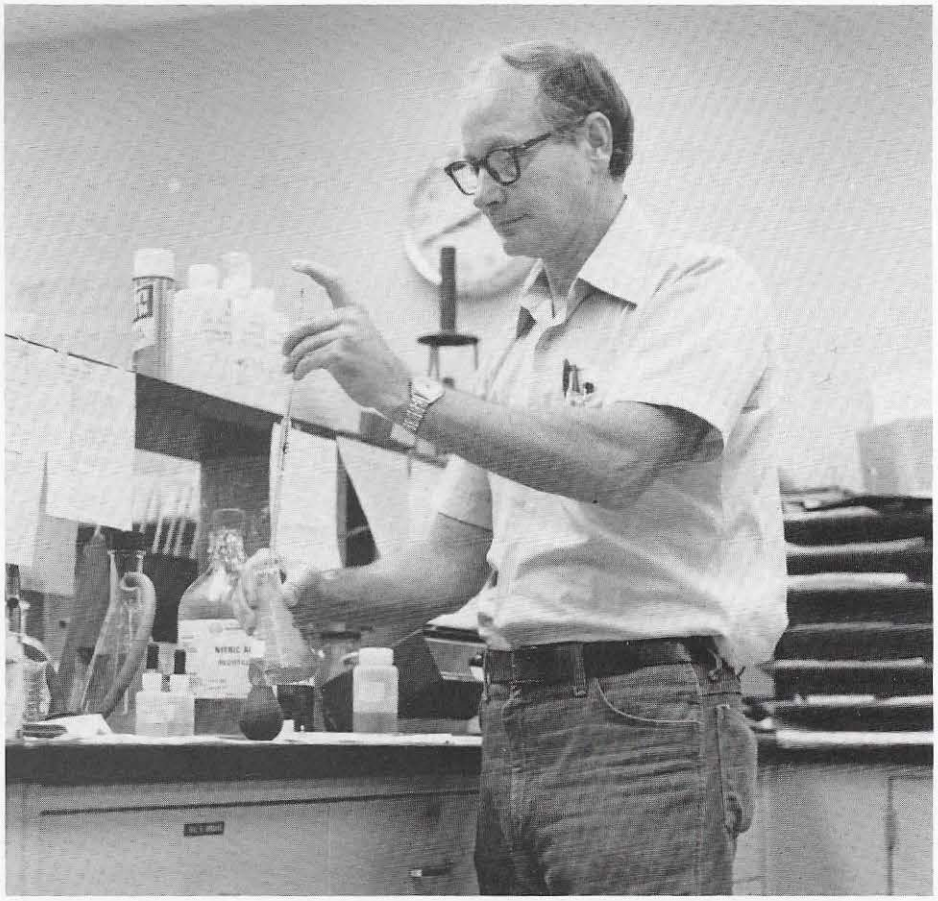
The chemistry section at Amos is important, even vital to the plant's operations, as is the chemistry section to every power plant. "No two chemistry sections are alike in responsibility or organization," Tom says. "This is because each has its own unique set of needs dictated by the equipment in use, the differing local environmental regulations and other factors."

"The chemistry section has a big job, but it is a job made big by a large number of smaller jobs," Tom says. He adds that, depending upon the day of the week, his people collect and record from 300 to 400 pieces of data each day.

In a technical world growing ever more complex and demanding, chances are that chemistry section employees at Amos and other Appalachian plants can depend on having a lot of "smaller jobs" to keep them busy for many years to come. □

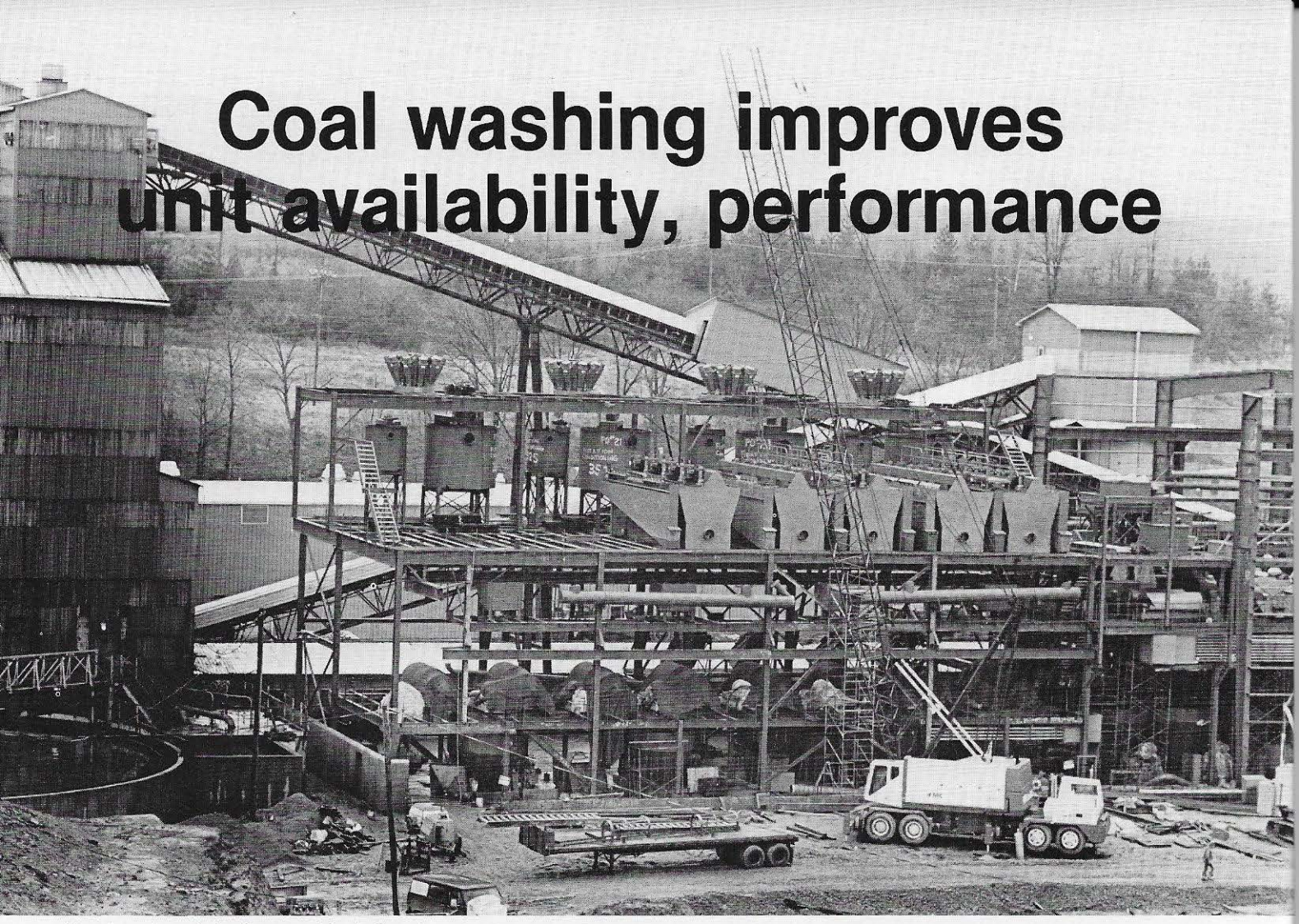


David Cash, performance technician supervisor, checks a demineralizer to make sure that the proper quality of water passing through the boiler and turbine is maintained.



Benjamin Hedrick, Jr., performance technician senior, makes a chloride analysis of water to determine if chloride is less than 100 parts per million. Higher concentrations could result in damage to the turbine.

Coal washing improves unit availability, performance



Construction of the fine coal froth flotation circuit at the Meigs No. 1 preparation plant is under way.

Over 87 percent of the electricity produced by the AEP System is generated by coal. Each of the 17 coal-fired generating stations we manage is a unique animal unto itself.

Each boiler would like to be fed the "perfect" coal — one which satisfies its own personal appetite. Dry bottom boilers choke and slag up if there is too much ash in the coal. On the other hand, wet bottom boilers need a little more ash to keep their coal digestive system running smoothly.

Unlike the human appetite which thrives on variety, a boiler wants to be fed the same menu day in and day out. It tends to be hard to live with if it is fed filet mignon one day and hamburger the next.

Keeping our boilers happy, generating steam to turn the turbines, is a critical step in making sure our generating units are on line and producing kilowatt-hours at the lowest possible cost. Making sure each boiler is fed coal which matches its appetite helps assure good performance.

Modern mining techniques, such as the continuous miner or longwall system, have greatly increased the efficiency of mining coal. However, at the same time, the coal coming out of the mine has decreased in quality due to the machines not being as selective in what they mine. Therefore, it becomes necessary to comprehensively wash or process the raw coal to provide the consistent quality that is essential to maintain high boiler availability.

American Electric Power has been a leader in the development of coal washing technology. Even though all AEP affiliated mines have been washing coal in one form or another, we have undertaken programs to upgrade the quality of the coal coming from all of our coal washing (preparation) plants.

AEP's Windsor Power House Coal Company near Wheeling, W.Va., is an example. A tipple, constructed around 1919, and a preparation plant built in the mid-1940s, were designed to clean the coarse, or larger pieces of coal coming from the mine. To meet today's boiler requirements, we must clean all of the coal, including the very fine particles.

A new preparation plant, which will be capable of cleaning 600 tons of coal per hour, is now being constructed at Windsor mine. The new plant will be able to clean all sizes of coal, even particles of face powder consistency.

Coal washing methods

Several methods of washing coal are used in a modern coal preparation plant. The selection of the system used is based upon the size and make-up of the raw coal.

At the new Windsor plant, a heavy media drum is used to wash the coarse coal (between six inches and five-eighths of an inch in diameter). This system uses water and a heavy mineral such as magnetite, to increase the

specific gravity, allowing the lighter weight coal to float and the impurities to sink.

The intermediate sized coal (five-eighths of an inch to 28 mesh) will be cleaned in heavy media cyclones. A slurry, consisting of raw coal, water and magnetite, will be fed under pressure to the body of the cyclones. The rock will be directed by cyclonic force to the outside wall and exit through the bottom. The coal, being lighter, stays near the center of the cyclone and is forced out through the top.

Fine coal, that which is smaller than 28 mesh in size, will be cleaned via the froth flotation system. The principle of gravity, which works well in other coal cleaning circuits, cannot effectively clean fine coal.

In the froth flotation system, a fine coal slurry is treated with a selective reagent before being pumped into the froth cells. The reagent allows the coal to attach to air bubbles, but does not affect the naturally unfloatable impurities. An agitator in the froth cell makes the air bubbles which float the coal to the top of the cells where it is removed by paddles. The impurities stay in the bottom and exit through a discharge pipe.

The new Windsor plant will also include the first filter press installations on the AEP System. The filter presses will be able to reduce the moisture content of the fine coal refuse from the plant and put it into solid form suitable for landfill compaction and stabilization. This is an aid in reducing the cost of refuse disposal and eliminates the need for settling ponds which can create a long-term environmental liability.

The new plant is expected to have significant impact on the clean coal product that comes from the Windsor mine. In 1979, Windsor coal averaged 20 percent ash with a BTU content around 10,300. The new plant is anticipated to reduce the ash content to less than 10 percent and increase the BTU level to above 12,000.

In addition to improvement in the average coal quality, the new plant will produce a much more consistent quality. The fluctuations in coal quality will be reduced, providing a more predictable product for the power plants.

Meigs preparation plant

A preparation plant addition, with the same basic cleaning circuits as Windsor, but on a larger scale, is under construction at Southern Ohio Coal Company's Meigs No. 1 mine. The Meigs plant will have the capacity to clean over 2,000 tons of coal per hour, making it one of the largest plants of its type in the nation.

The Meigs plant has two unique aspects — its design, and a computer control system.

The design of the building itself is unusual in that it is only 65 feet high and 496 feet long, a marked contrast to most coal-washing plants which normally resemble grain elevators in structure. The redesigned physical structure should reduce maintenance problems and improve the daily operation of the plant.

A "first" for an AEP preparation plant will be the computer control system at the Meigs plant which will continuously monitor the status of various components of the plant and respond to any changes. This rapid response will result in smaller variations in quality of the cleaned coal.

The obvious benefits of comprehensive coal washing have resulted in several new plants and additions on the AEP System. A comprehensive washing plant has been in operation at the Muskingum mine east of Zanesville since January 1980, and construction is starting this summer on a washplant addition at the Raccoon No. 3 mine of Southern Ohio Coal Company.

In addition to the conventional washing systems in the AEP System, the company has supported research in the coal washing process known as Otisca. Unlike the conventional coal washing processes which use water pulsations, heavy minerals to increase the water's gravity, centrifugal forces, or frothing, this process developed by Otisca Industries, Ltd., of Syracuse, N.Y., uses a natural heavy liquid with a fixed specific gravity of 1.5.

An Otisca demonstration plant is in operation at AEP's Central Ohio Coal Company. Initial operation began in November 1979, and the plant is now undergoing further testing and evaluation.

In 1977, only 49 percent of the AEP-affiliated coal was washed. That figure has now increased to about 79 percent, and by 1984, nearly all of the affiliated coal should be washed, according to Peter R. DeMao, vice president-planning and engineering for AEP Fuel Supply Department in Lancaster, Ohio.

Coal washing benefits

Past experience and tests have indicated that the added expense of washing coal to provide better quality pays off in the long run by improving the availability and performance of AEP System generating units.

In an era such as the 1980s when construction of new generating capacity places a great financial burden on an electric utility, the AEP System has found that making the most of existing capacity through use of consistent high quality coal is a prudent step.

"By providing a higher BTU content, we are using less coal to generate the same amount of heat. This helps reduce coal handling costs before it is burned and ash handling costs after it is burned. This includes transportation, conveying, storage, equipment maintenance and ash disposal," DeMao said.

In addition to improving fuel quality to increase generating unit availability and reduce operating costs, coal washing helps minimize the environmental consequences associated with the burning of coal.

Comprehensive coal washing facilities being built today have the potential of making significant contributions toward reducing SO_2 emissions on an economic basis. "Depending on the type of coal used, the sulfur gas emissions can be reduced between 10 and 50 percent through coal washing," DeMao noted.

Today's technology has given the industry a start in controlling SO_2 before the coal reaches the power plant. The company is confident that much more can be done through practical research to expand upon coal washing technology as a major environmental control system.

The AEP System has always strived to provide the lowest possible price per kilowatt-hour of electricity to its customers. By feeding our boilers washed coal, both from our affiliated mine and outside suppliers, we are helping improve the operation of our power plants — thus, continuing our efforts to generate electricity at the lowest possible cost. □

A troubled young man stands precariously on the ledge of the 6th Street Bridge as firefighters try in vain to talk him out of jumping into the Ohio River.

Rescue of potential suicide "all in a day's work"

For his part in the successful rescue of a potential suicide, Jerry Doss, a deputy chief with the Huntington Fire Department and a parttime meter reader for Appalachian, has been awarded a plaque "for heroic action above and beyond the call of duty" by Local 289 of the International Association of Fire Fighters.

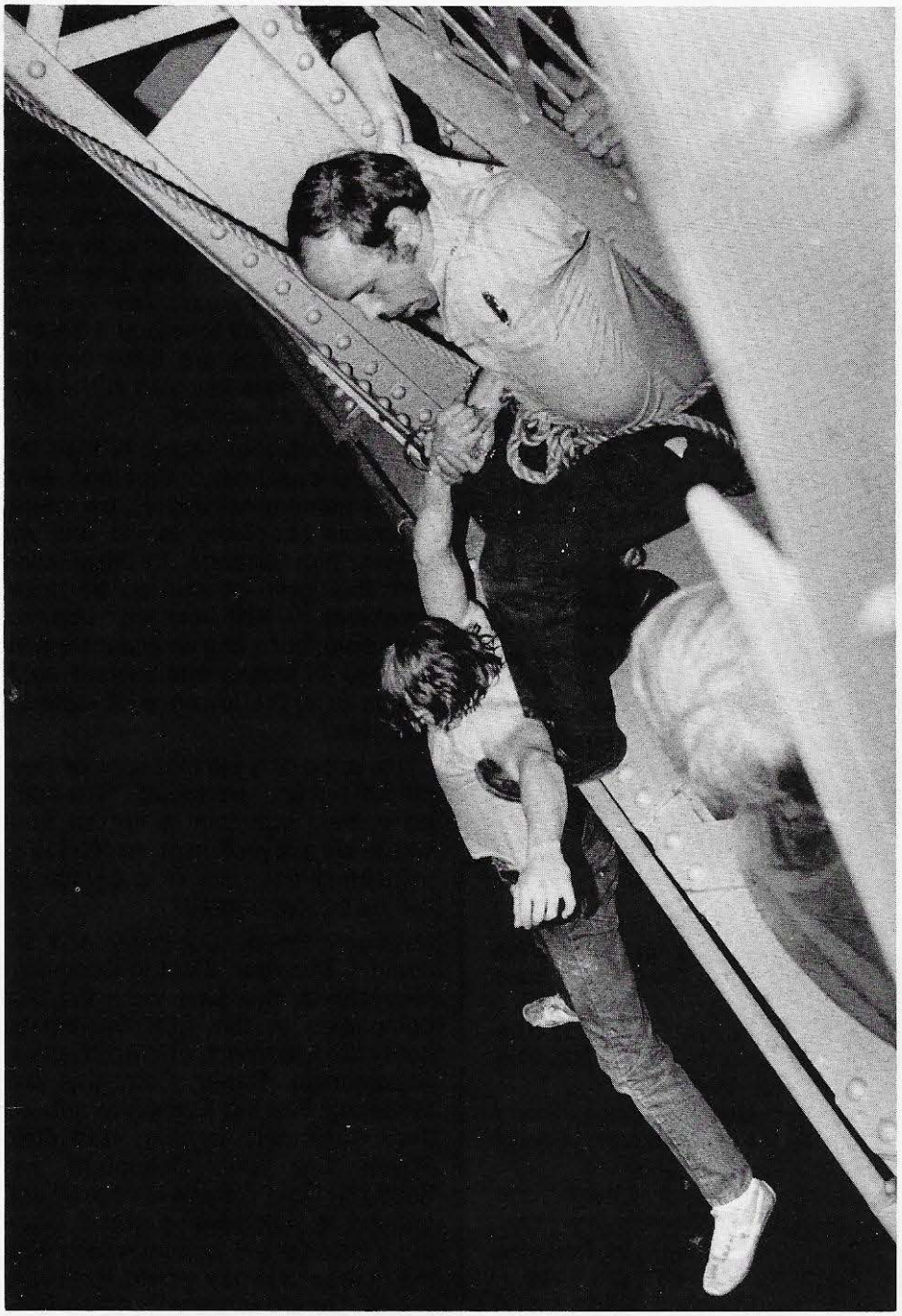
Jerry was on duty the afternoon of May 1 when a call came in that there was a man on the 6th Street Bridge, getting ready to jump into the Ohio River. When he and another firefighter, Herschel Marshall, arrived at the bridge, law enforcement personnel were already on the scene. But Jerry and Herschel went straight to the young man.

"The boy had a pen knife," Jerry recalls, "and every time we would get close to him, he would grab the pen knife and threaten us with it. We tried to talk the kid into coming back up from the edge of the bridge, but after about an hour and a half, it started to get dark and it became apparent that he had tuned us out."

Then began the effort to bring the youth over the railing and back to safety.

"I told Herschel to go over to the other side, up above the kid, while I got his attention. We borrowed a pair of leg cuffs from the deputy sheriff and tied a rope around Herschel and snapped one end of the leg cuffs on the rope. Herschel was going to try to snap the other end of the cuffs on the boy's arm.

"When I got over the rail, I started talking to the boy. When Herschel went to snap the leg cuffs on his arm, the boy spun around and the cuffs hit



Herschel Marshall tries desperately to hold onto the youth while Jerry Doss (partially hidden) makes his way across the ledge to help.

the I-beam. He started coming toward me to get away from Herschel. Then he stopped and turned, and Herschel grabbed his hand. It was then that the boy jumped. He was squirming like a fish and it was probably two or three seconds before I could get to him. Herschel had every bit of the boy's weight on himself," Jerry said.

Jerry is a 26-year veteran with the fire department, and this was not his first call for a "jumper". Still, he said, "when I got back up there, I was shaking like a leaf."

Jerry first got involved with the fire department when he chose not to transfer to Altoona, Pennsylvania, when his employer, Sylvania Electric, closed its plant in Huntington. "I was born and raised here, and I really didn't want to go. My father-in-law was a firefighter at the time, and since I was out of a job, I decided to take the fire department exam." The rest is history.

"One thing that has stood out in my mind over the years is my second day on the job. There was a fire at a used car place, and the roof fell in on me and another fireman," he said.

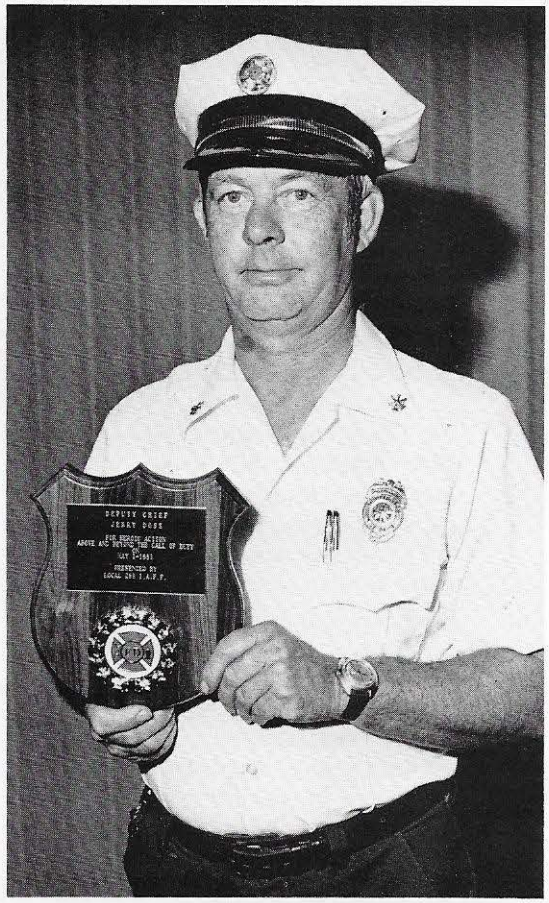
Despite that rather unnerving experience, Jerry said, "I thoroughly enjoy every bit of it. There are no two fires the same and no two days alike. They are all different, individual events."

Although danger is a constant presence, fire fighting has its humorous moments, usually appreciated after the fact, according to Jerry.

"I remember one fire just after I had been promoted to lieutenant. There was another fireman with me, and we crawled into a room on our hands and knees. We could see the glow of the fire, but we couldn't tell what kind of fire it was because the smoke was so thick. We threw water on that fire for two or three minutes and couldn't get it out. Then we discovered the fire was back behind us and it was reflected off a full mirrored wall in the room.

"Firemen have to be crazy, or we wouldn't be in the job to start with," Jerry concludes with a smile. □

Rescue photos courtesy *Huntington Publishing Company.*



Jerry Doss

AEP begins home energy audit program

The AEP System has begun another phase of its energy conservation program SAVE (Save America's Valuable Energy) with implementation of a home energy audit program. Initially the program will be carried out in five of the seven states served by the System.

The Residential Conservation Services Program — as the program is officially known — is AEP's response to the National Energy Conservation Policies Act of 1978 (NECPA). Part of the National Energy Act, NECPA requires that the larger electric and gas utilities offer residential customers home energy audits conducted by certified "auditors." The utility must also offer to help customers by assisting in the "arranging" of financing and installation of recommended energy-conservation measures.

The law has set up two types of home audits. The utility is required to offer customers a Class A audit (conducted by the company's auditor in the customer's home) and in some states, the option of a Class B audit (a computerized analysis of data collected by the customer).

Cost of a Class A audit to the homeowner is $10 in Michigan and $15 in Ohio, Indiana, and Kentucky. Tennessee has proposed that the audit be free; West Virginia has proposed a $15 charge, and Virginia is one of the few states in the nation without an RCS plan. However, final rules are being prepared whereby the U.S. Department of Energy would administer an RCS program in Virginia.

Notification of customers by the operating companies is being done via bill stuffers and special mailings detailing the program.

AEP last January began training 170 System employees to be auditors and 32 employees as technical support personnel.

"We had six days of technical support classes in January," said William R. Coleman, director of customer services for the AEP Service Corporation. "The auditors were in two groups, with each attending two weeks of classes at The Ohio State University. Instructors were operating company and AEP Service Corporation personnel, including experts from the Customer Services, Engineering, Legal and other departments. It was a very comprehensive training program."

The entire auditing process is both efficient and informative for the customer and the company. Here's how it works.

Once the customer notifies the company that an audit is desired, the auditor makes an appointment with the homeowner. The auditor first makes a detailed study of the major energy sources in the home: heating, cooling and water-heating systems. He or she also measures the home and checks its insulation and weather stripping. The auditor carries either a lightweight computer terminal, which is hooked up to the homeowner's telephone and relays the compiled information to a computer in Atlanta, Georgia or, calculations are performed using a pre-programmed hand-held calculator. With either system it takes only a few minutes for the auditor to prepare a SAVE/RCS Homeowner Report. It details conservation measures the homeowner can take to increase energy savings and provides a breakdown of the estimated cost of the improvement — to be done either by himself or by a contractor. The program also lists the approximate first-year savings the owner can expect to realize if the efficiency measures are done and the number of years involved in the payback of the investment.

"The homeowner report is then left with the customer," Coleman said. "If the homeowner wishes, we are responsible according to the law, for helping him 'arrange' for installation and financing of the conservation measures." AEP will also be responsible for having an installation inspected in states that require such action or in the absence of state inspectors.

"This is the only job that our own people will not do," he added. "The company feels that this is not an area where we are proficient, so the job of inspecting the work of a contractor will be subcontracted."

Michigan Power Company and Indiana & Michigan Electric Company-Michigan in late June were the first companies in the AEP System to notify its customers. In West Virginia, Appalachian Power Company and Wheeling Electric Company notified their customers in July, and Ohio Power Company, Columbus and Southern Ohio Electric Company and Indiana & Michigan Electric Company-Indiana will communicate with their customers this month. Kentucky Power Company plans to do so later this summer or early in the fall. Kingsport Power Company is in a "holding pattern," since an RCS plan has not been approved in Tennessee. Finally, because Virginia has no RCS plan, Appalachian's customers there are not affected at this time.

Lawson Bailey, Appalachian's customer services manager, says, "The West Virginia RCS plan was developed through the joint efforts of the West Virginia Fuel and Energy Office and all covered gas and electric utilities throughout the state. The cooperation within this group has been outstanding and has resulted in the best possible RCS program for the state." □

Certified auditors

Certified auditors for Appalachian and Kingsport Power Companies are as follows:

Abingdon: Bucky Buchanan, Mike McKinney, Lynn Martin, Bud Hutton, Phillip Young.

Beckley: Dwight Linkous, Sandy Palen, Dwight Williams, Randal Robertson, David Langford.

Bluefield: Heidi Litton, Jim McQuail, Basil Vassar, Mary Kirby.

Charleston: Sandy Byus, Darrance Woodrum, Dan Ellars, Jim Webb.

Huntington: Jon Atchley, Carl Elkins, Wimpy Wickline, Richard Rice, Joe Jones.

Kingsport: Luke Kesterson, Buford Quillin.

Logan-Williamson: Rocky Kessinger, Frank Monaco, John Skidmore, Bill Bias, Claude Ward.

Lynchburg: Jessee Ashworth, B. J. Pearson, Donna Baum, Earl Driskill, George Murphy.

Pulaski: Jim Boult, Larry Rakes, Ed Mahler, Larry Bucklen, Gary Bolt, Katherine Coleman.

Roanoke: Doug Carter, Tim Lawlor, Miriam Martindale, Joel Wilson, Claire Davis, Charles Echols, Debbie Leigh, Larry Jackson, Leonard Jenkins.

Lou Sturm, engineering technologist, GO T&D Communications, Roanoke, on the roof of the Poor Mountain MW-1 microwave site, makes an adjustment to the antenna path alignment.

Microwave expansion underway

Appalachian Power Company is a creature of lines, conductors and circuits, that is, physical structures made of aluminum, steel and alloys that transmit and distribute electricity.

Yet, there is a facet of the business that is "wireless" and has grown over more than two decades to the point of enormous importance — the company's microwave communications system. Whenever you pick up the phone on most parts of the system and call Canton, Charleston, Bluefield, or any other location within the AEP network, your words are transmitted by microwave. That is, they travel through the air in beams of electromagnetic radiation.

"Saturated" is the word Beryl W. Middaugh, communications superintendent, uses to describe the condition of the system's main north-south artery connecting the computer operation in Roanoke with the AEP central computer operation in Canton, Ohio.

Largely as a result of the current and increased future demands on the system, a five-year modernization and expansion program was undertaken in late December 1980. The project is planned to accommodate demands for the next 10 to 15 years.

Another motive for the upgrading involves changes in Federal Communications Commission (FCC) rules and regulations. These changes require major replacements of transmitter-receiver units and antennas. The FCC requires replacement of reflectors at microwave stations with parabolic antennas, enlargement of existing parabolic antennas and modification of station frequency equipment to eliminate what the FCC describes as "bounce out" of signals that may interfere with other adjacent systems.

Underway now, at a cost of $1.06 million, is the upgrading of Appalachian's portion of MW1, the main north-south microwave route from Roanoke, Va., to a location near Philip Sporn Plant at New Haven, W.Va. The route, which continues to Canton, is called "the cattle train" or "superhighway" because it is the main trunk line that is fed by satellite stations along the way. Completion of the work is scheduled for September 1981.

MW1 upgrading is only the first phase of the overall project. Before describing the remainder of the work, an explanation of microwave technology is in order.

Microwaves are so named because they are relatively short, high frequency waves, compared to the long wave lengths of commercial broadcasting, for example. Microwaves share many characteristics with light waves. They travel in straight lines and are blocked by solid objects. Microwaves can be focused, beamed, refracted and reflected in much the same manner as light. In fact, many microwave devices are essentially large-scale versions of such optical components as mirrors and lenses.

One drawback is that microwaves pass directly through the upper atmosphere without being reflected back to earth (in the absence of a satellite). Thus, a signal cannot normally be picked up by a receiver beyond the horizon. Microwaves are

generally transmitted through the atmosphere along a line-of-sight path by a network of relay stations placed 25 to 30 miles apart, where feasible. Forty miles is generally the maximum distance that reliable communication can be obtained. In southwestern Virginia and southern West Virginia, repeater stations are located on mountain tops. Poor Mountain near Roanoke is a prime example.

Because information-carrying capacity is proportional to frequency, one big advantage microwaves have over ordinary radio waves is that microwaves can carry much more information. For example, a single microwave beam can carry many hundreds of telephone conversations simultaneously. And since microwaves permit the precise aiming of signals, very low power is required for transmission.

And so, while the system of antennas, transmitters and receivers necessary to transmit microwaves over long distances may seem costly, the large information-carrying capacity of microwaves actually makes for great economy in the long run.

The direct contact of most persons with the microwave system is through the telephone. "But voice communication is actually just a small part of the information that is transmitted over the microwave network," Middaugh pointed out.

"The transmission of data is the key function of the system," he said. "The operations, accounting and payroll functions of this company, as well as those of the other AEP operating companies, depend on high-speed data transmission via our microwave system."

A sampling of the other functions communicated over the system include supervisory control of hydros; economic load dispatching, which encompasses the whole realm of data pertinent to the minute-to-minute loading of individual generating units; telemetering or the flow of power between AEP and interconnected systems; station alarms; and, air quality monitoring.

The entire modernization program now underway will double the number of channels from 300 to 600 (a voice communication to Canton, for example, uses one channel). This will take care of immediate as well as short-term future needs.

The second phase of the project focuses on the MW1A system, from Roanoke to Canton by way of Mountaineer Plant. This route roughly parallels the MW1 route and requires the same modifications. Completion of the MW1A work is scheduled for December 1982.

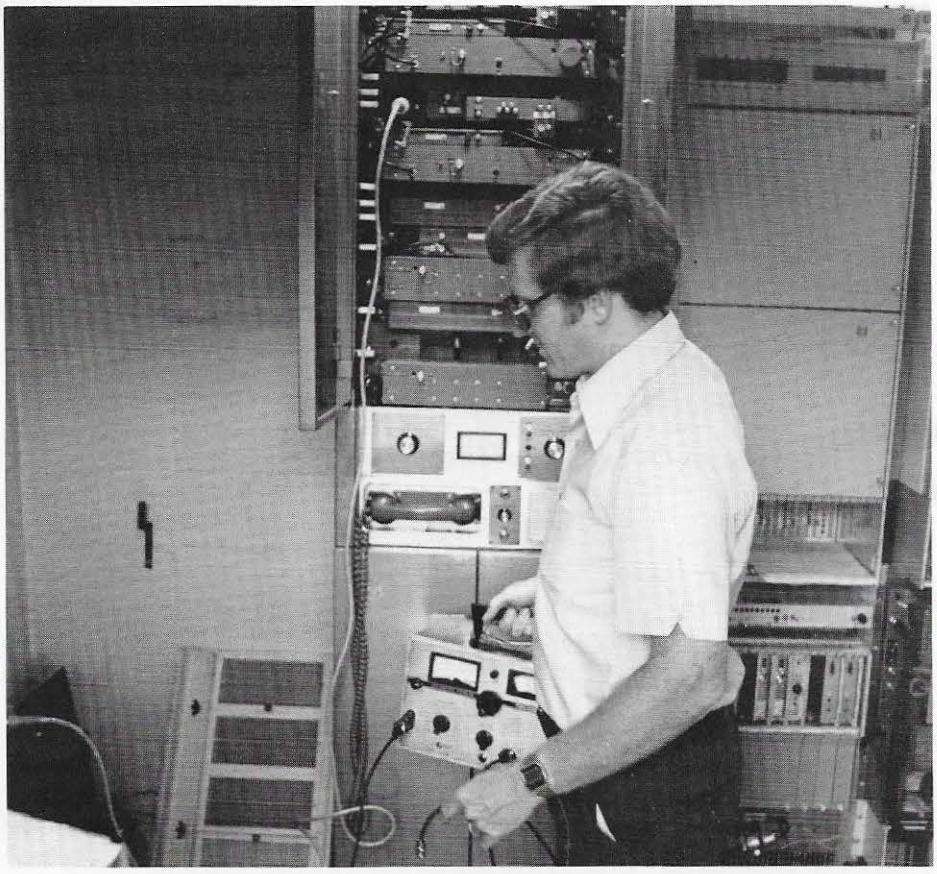
The third phase involves the MW2 system, or the southern route, from Roanoke to Kingsport, Tenn.-Kingsport Power Company's jurisdiction, and to Hazard, Ky.-Kentucky Power Company's jurisdiction. The MW2 route goes from Roanoke to Big A Mountain near Honaker, Va. where it sends out two branches: one to Clinch River Plant, Abingdon, Kingsport and the TVA system; the other to Grundy, Flatwoods, Pikeville, Kelly Fork and Hazard. This work is scheduled for 1983-84.

In addition, the HABS system — Huntington-Ashland-Big Sandy Plant — will be modernized in 1984. Also, several leased telephone interconnecting facilities will be replaced with microwaves. This involves Williamson-Logan, Pulaski-Claytor, Fieldale-Roanoke (including the Axton 765 kv station when it is built) and Point Pleasant-Huntington.

The origin of the present system was in 1954, when a low-density system of 24 channels was built between Roanoke and Charleston. This was about the time that private industry started utilizing microwave technology. It wasn't too many years before this that microwave had been applied in a practical sense. Until World War II and the development of radar, microwaves were a scientific curiosity.

The reasons Appalachian got into microwaves are still true today. "One of the prime reasons Appalachian and AEP got into microwave capability was to handle the circuitry and data that we were not able to transmit over telephone facilities. There was also the economics. It's a money saver. And it is more reliable than telephone lines," Middaugh said.

There has been no decline in the capability of the system. On the contrary. "The data and information that can be conveyed by the microwave system are almost limitless. As long as there are transducers available to provide data as an electrical signal, we can transmit it on the system to supply system needs," he said. □



Lou Sturm prepares to use a frequency selective voltmeter to check for the proper microwave baseband inside the Poor Mountain MW-1 microwave station near Roanoke.

APCO gets new computer

The 4341 computer has arrived. Gone is the 1401. And on the way out is the 360.

This is not some inter-galatic succession of droids. Rather, it represents the latest changing of the guard at Appalachian's Roanoke Computer Center. The recently installed IBM 4341 is the first major updating of computer hardware in over 10 years. The physical side of the improvement was relatively easy. "Making our current programs compatible with the new system is the largest and most crucial phase of the operation," said Paul Clower, Systems and Procedures Supervisor. As a result of the change in hardware, the computer software — some 700 programs — must be revised to conform to the "language" and operating procedures of the latest generation of computers. "The fact that we have so many programs, the vast majority of which are GO Accounting functions, is a testament to the impact of the computer on our business," said Earl Robertson, data processing supervisor.

In order to bridge the gap between the old systems and the 4341, outside firms were retained to convert the 1401 programs to a language useable on the new system and to provide local technical assistance during the early phases of system use. Additional personnel experienced in the new computer technology and conversion procedures have been hired. Existing employees have been receiving training in the new hardware and software.

"Once the transition period is passed, many new applications can be designed and implemented. The results will be greater operating efficiencies," said Robertson.

Clower added, "The hardware and software available with the 4341 system are faster, more dependable, and more flexible. An example of this new flexibility is the software which allows the Systems and Procedures programming staff to write and test programs using video display terminals located at their desks.

Robertson reviewed the evolution of the company's computer capability. "The Roanoke computer center was established in November 1956 with the IBM 650. This computer card-type system was used for customer billing and accounting operations for the next nine years," he said.

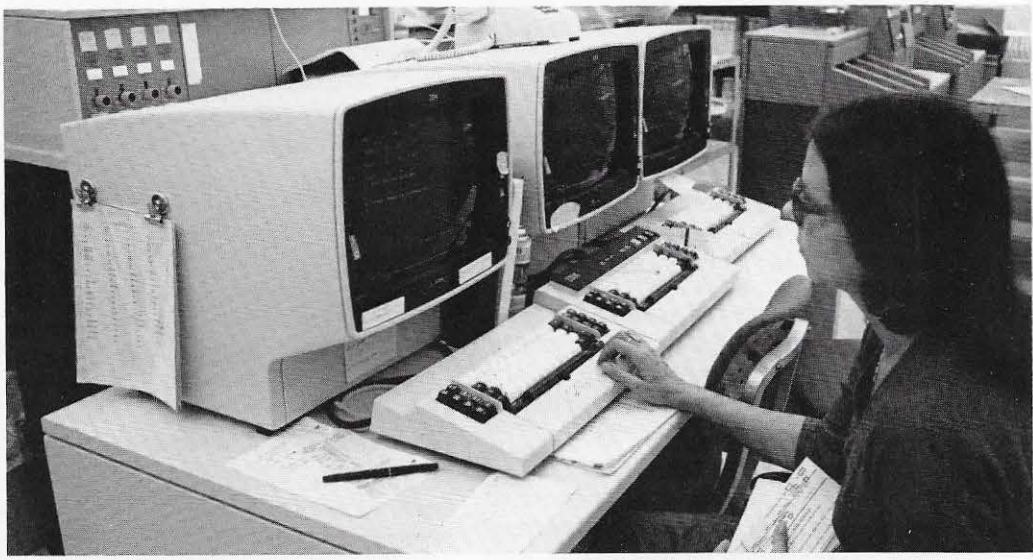
"A second generation of card-type computer system, the IBM 1401, arrived in September 1961 when operations were expanded to include GO Accounting. Continued use of this system was made into 1981 for GO Accounting operations."

In May 1965 two innovations were introduced — magnetic tape and centralized computer operations. A second model 1401, using tape instead of cards as the data recording media, replaced the obsolete IBM 650 for customer accounting operations. The combination of the 1401, a General Electric TDS-90 transmission terminal and the AEP microwave system provided the means to initiate a centralized AEP operation.

Hence, in May 1965, Roanoke began transmitting data to Canton for processing on the IBM 7074. The output was then transmitted back to Roanoke for printing bills and registers and other functions. "This joint use of the 7074 by the various operating companies afforded considerable savings," Robertson said.

The next improvement came in February 1968 when what amounted to the third generation of computer systems, the IBM 360, was installed for customer billing, stores, payroll and system meters. The 1401 tape system used for this purpose was removed two months later.

"And since that 1968 update, the computer work load has increased by 85 percent. In 1978 alone, for example, the increase amounted to 21 percent. We had reached the point where our 360 system was running 24 hours a day and our overall scheduled work load was at 85 percent, whereas a safe margin is 75 percent. Also, IBM would no longer guarantee maintenance support of the 1401 system after April 1981," Robertson said.



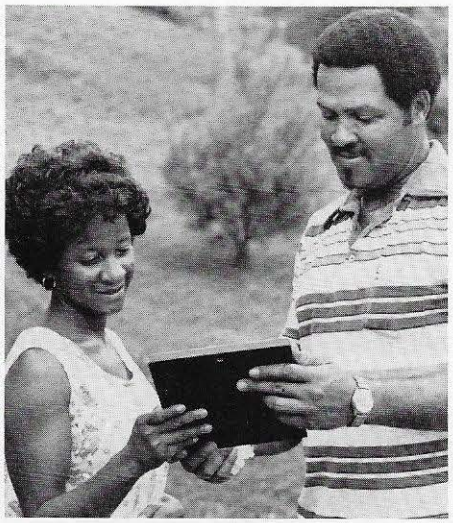
Marsha Kelly, data processing operator C, operates one of the three CRTs (cathode ray tubes) that comprise the control center for the new 4341 system.

As a result the recommendation was made and approval was granted for acquisition of the 4341 system, IBM's most advanced hardware, in July 1980.

Joe Mendolia, assistant section head in charge of the Systems Programming Group in New York, is the project coordinator for the 4341 installation in Roanoke. Mendolia added one other positive feature of the new equipment. "The 4341 allows for a 'networking' function. This will provide automatic routing of work to and from the Roanoke center. It will link Roanoke with Canton and New York. As a result, some of the labor-intensive transmission of data that is done nightly will be automated," he said. □

WHO'S NEWS

Abingdon



Doug Brown, line mechanic A, and his wife **Carolyn** have been awarded life memberships in the Virginia Jaycees and Jayceettes, respectively. The honor came as recognition from the Lebanon Jaycee and Jayceette organizations for dedication and service not only to the local chapter but to the state group. Carolyn was also honored as the outstanding state Jayceette external chairwoman during 1980-81.

Cathy, daughter of Jim Cook, station mechanic B, received top honors at the district 4-H meet for her demonstration on caring for tots. Cathy, who represented Washington County, also won first place in both prose and poetry in a forensic competition.

Jim Cook, station mechanic B, is president-elect of the Abingdon Elementary School Parent Teachers Association. □

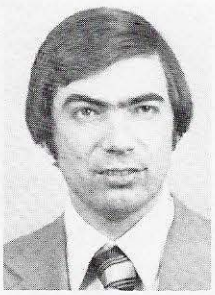
John Amos

Susan, daughter of Mary Lou Bannister, junior clerk, won the June competition for the best dormitory room in the Resources Management complex at Laughlin Air Force Base, Texas. She is an airman first class.

Mike, brother of James Poindexter, barge handler, has been drafted by the Cleveland Indians. Mike was one of the finest all-around athletes in the Kanawha Valley Conference. He excelled in football at fullback and displayed his strong arm at quarterback when the Stonewall Jackson High School Generals went to the shotgun formation. He started as forward for the basketball team, which reached the semifinals of the state tournament. And the righthander pitched and played third base for the baseball Generals. □

Beckley

Division Manager **Tom Rotenberry** was named general chairman of the Raleigh County United Fund's 1982 campaign. He is also president of the Fund's board of directors. **Tom Wiseman,** power engineer, has been elected to the board of directors and will serve as treasurer.



James, Jr., son of Jim Kirby, T&D clerk senior, has been promoted to engineering supervisor of Monongahela Power Company's Fairmont Division.

Ronnie, son of Bob Dyke, Oak Hill line mechanic A, was elected state senator and sheriff of his county in mock elections held at Mountaineer Boys' State. Ronnie represented Woodrow Wilson High School.

Walter, son of Walter Leach, line mechanic A, was elected to the Beckley Babe Ruth 13-year-old All Star Team.

Jeff, son of Ray Vest, administrative assistant, was selected first runner-up to the king of the Raleigh County Youth Fair. Jeff, who recently completed the sixth grade at Shady Spring Elementary, received the school's science and reading awards and finished third in his class with a 3.85 grade average. Twin brother **Mike** received the social studies award and finished fourth with a 3.79 grade average.

Cathy, wife of David Langford, customer services advisor, has been appointed head of the respiratory therapy department at Beckley Hospital. □

Bluefield

Hank Goforth, right-of-way agent, was installed as first vice president of the Bluefield Lions Club.

Frances, wife of Morris Yost, line superintendent, was installed as treasurer of the Cumberland Garden Club.

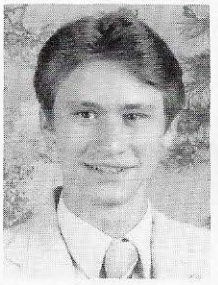
Juanita Crouch, personnel clerk A, and **Frances Keller,** personnel assistant, walked the entire distance in the 10-mile Walk-A-Thon to raise money for the Mercer County Cancer Society.

During the 40th installation and awards banquet of the Greater Bluefield Jaycees and Jayceettes, **Larry Houston,** engineering technologist, GO T&D Communications, was installed as Jaycee treasurer and **Fran DeBellis,** electrical engineer senior, as a director. **Jackie Houston,** customer accounts representative A, was presented the Spark-Ette award and an award for first quarter project chairman. □

Central Machine Shop

"Dee Dee", daughter of Jerry Wilson, tool crib attendant, was elected a cheerleader for Hayes Junior High School. She is also a member of student council.

Randal, son of Clifford Witt, winder 1st class, was selected for the second consecutive year to represent Conquerors Christian School in the Society of Distinguished American High School Students. Randal is a member of the basketball team and vocal ensemble which won first place awards at the state accelerated Christian education convention. He also won first place in the woodwind solo and duet categories and competed in the international convention in New York.



Randal is also a member of the 440 relay team which placed second in state competition.

Lynda Gross, plant clerk C, was selected for another year as a member of the Rockettes, cheerleaders for the W.Va. Rockets football team. The Rockettes will give pre-game and half-time performances at all home games as well as performances at the Roanoke, Va., and Jacksonville, Fla., games. □

Charleston

Charles Neeley, retired general serviceman, and his wife **Lillian,** celebrated their 50th wedding anniversary with an open house in the Elkview Baptist Church activities building.

Mike Stevens, tracer, has completed the West Virginia National Guard's two-week Noncommissioned Officer Academy leadership training course. Mike is a sergeant in the Guard.

Jim Ryan, line mechanic B, will travel to Orlando, Florida, to accept for the South Charleston Army Reserve 261st Ordnance Company the U.S. Army's annual Philip A. Connelly Award for excellence in food preparation in a warlike setting. Jim is the company's mess sergeant and his group topped the field of 4,200 challengers to win the multi-layered competition. The contest was held under simulated combat conditions, and food service teams worked in mobile kitchens and served standard Army fare.

Bob Sanney, St. Albans area superintendent, was elected to the board of directors of the Ranch Lake Estates Property Owners Association. □

General Office

Don Linkous, communications specialist in GO T&D Communications, Abingdon, will head the Washington County United Way Drive for 1981-82. He is currently first vice president of the United Way and has served on the board for five years.

Nikki, wife of Bud Jones, engineering supervising engineer, GO T&D Engineering, Roanoke, is a member of the Rockettes bowling team which won the regular season and a three game roll-off to take first place in the Lady Viking League at Viking Lanes.

In graduation exercises at National Business College, **Nancy Seay,** classification and accounts payable clerk C, GO Accounting, Roanoke, received the M. A. Smythe Award for being the most outstanding accounting graduate.

Morris III, son of Morris McCrary, Jr., assistant accounting manager, GO Accounting, Roanoke, graduated from the University of Virginia with a doctor of medicine degree. He was a 1973 AEP educational award winner. □

Huntington

Fred Helm, division manager, was reelected president of the Huntington Industrial Corporation for a one-year term.

Mike Fotos, division superintendent, and **Tom Kincaid,** station crew supervisor NE, completed the entire 6.2 miles in the second annual WGNT Fourth of July 10K run. Neither had participated in a run before.

Charles, son of Harold Back, service supervisor, graduated from Hawaii Pacific College with a bachelor of science degree in business management. Charles, a staff sergeant in the United States Air Force, works with the Pacific Air Force Headquarters legal department as a paralegal. He will leave Hawaii this October for Plattsburg, New York, where he will attend graduate school, working on a masters degree in business management. He will also apply for officer's training school. □

Kanawha River

Gary Alan, son of Geraldine Pack, utility operator, won second place in the West Virginia Student Craftsman Fair for a chisel he made in shop class. He is a junior at East Bank High. □

Kingsport

Jessee, son of Line Supervisor Cleo Crawford, won blue ribbons for first place in the 50-yard dash, first place in the sack race, first place in the three-legged race and for reading more than 20 library books during the school year. He also won a white ribbon for third place in the frisbee throw and a certificate for perfect attendance for the school year. Jessee is a student at West View Elementary. □

Lynchburg

J. Robert Davenport, division manager, was elected chairman of both the community/chamber improvement department and the executive advisory council for the Greater Lynchburg Chamber of Commerce.

R. C. "Snooky" Withers, line crew supervisor NE, was chosen as a delegate from Nelson County to represent the West District at the state Democratic convention.

Jimmy and **Duane,** son and grandson, respectively, of Ed Rice, retired heating and builder sales representative, are members of the Odyssey Band which is performing at American military bases in Europe during a six-week USO tour this summer.

Tim, son of Snooky Withers, line crew supervisor NE, won second place in the state 4-H Club competition at Virginia Tech for his soil conservation project.

George Gillette, collector, was selected as a member of the all state team of post commanders and quartermasters for 1980-81, representing Lynchburg Post 8184 of the Veterans of Foreign Wars.

Loyd Smith, retired administrative assistant, was named chairman of the 1981-82 world community committee for the Lynchburg Rotary Club.

Jan, wife of Electrical Engineer Doug Fitchett, helped entertain the 225 residents of Westminster-Canterbury as they celebrated the home's first year of operation in Lynchburg. Jan, a former drama teacher at E. C. Glass High School, is a member of the local singing telegram service, "Voices", and is youth director at Peakland Baptist Church.

David Tibbs, a helicopter flight instructor for the U.S. Air Force in Pensacola, Florida, has been promoted to Lt. Commander and transferred to the Phillipines. **Melinda Goldberg** has been promoted to major in the U.S. Army. She is stationed with her husband, Commander Goldberg, at Fort Eustis. David and Melinda are the children of Roy Tibbs, retired commercial engineer.

James Pullen, retired custodian, was honored by the Baptist Sunday School and B.T.U. Congress of Virginia for his services as a field worker. He was commended for his dedicated service for the Congress in the Lynchburg-Charlottesville District, outstanding contributions in fund raising and obtaining new memberships, and by significantly increasing support for the Congress within the district. □

Roanoke

Crystal Angela, daughter of William Walker, Jr., Rocky Mount line mechanic D, was named Little Miss Franklin County. She was presented $100 in cash, a dozen long stem roses, small cedar chest, gold bracelet, jewelry box and a trophy.

Bill, husband of Vicki Rutledge, secretary-stenographer, was elected president of the Roanoke Bowling Association for 1981-82.

Ralph, husband of Jo Ann Rakes, T&D clerk B, was elected president of the Fieldale Lions Club for 1981-82.

Jo Ann Rakes was elected secretary of the Fairystone Squares, a country and western square dance club in Martinsville. □

Philip Sporn

Randy Nicewonder, personnel assistant, won the 220 pound division of the bench press competition in the Second Annual Rio Grande College Power Lift and Bench Press Competition. His winning lift was 375 lbs. Randy also won the best lift of the day award, which is figured by using body weight versus lifted weight. The meet was judged by Roger Estep, world's best built power-lifter and world ranked in the 198 lb. class. □

NEWCOMERS

Bluefield
Gary Phillips, electrical engineer.

Charleston
Betty Asbury, junior clerk.

General Office
Susan Kelly, junior clerk, GO Accounting, Roanoke. **Dennis Gilreath,** accounting staff assistant II, GO Accounting, Roanoke. **Jon Williams,** commercial engineer, GO Customer Services, Roanoke. **John Hartman,** personnel assistant, GO Personnel, Roanoke. **George Keller,** operations engineer, GO Operations, Roanoke. **Carl Huff,** engineering technician, GO T&D Meter, Roanoke.

Huntington
Kent Eldridge, energy services technician, Point Pleasant. **Brenda Adkins,** junior stenographer. **Shelley Goff,** junior clerk.

Kingsport
Hazel Addington, telephone operator. **Harold Walker,** meter reader.

Mountaineer
Carolyn Rickard, junior clerk. **David King** and **Larry Dusold,** performance engineers. **Charles Knotts, Wayne Barnett, Steve Price** and **David Hood,** utility workers. **Chuck Stanley,** control technician junior.

Philip Sporn
Clifton Gordon, performance engineer. □

Pulaski

Gene Musser, line crew supervisor NE, and **Barry Hicks,** engineering technician, were elected chief and assistant chief, respectively, of the Hillsville Volunteer Fire Department.

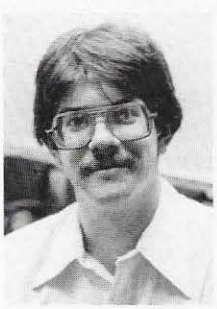
Ed Mahler, customer services representative, was an award winner in two sessions of a Dale Carnegie course he took. The class members voted to give Ed a copy of the book, "Enrich Your Life The Dale Carnegie Way", in recognition of his wholehearted participation in a class assignment for session 11. In session 14, he won two awards — one for best convincing the class that he has made a commitment to continue to apply the attitudes and skills developed in the training and one as the person the class members felt had achieved the most during the course.

Martha Ann, daughter of Sebert Sisson, customer services representative, is an intern with ***The Galax Gazette*** this summer. A rising senior at the University of Richmond, she is working on a triple major in sociology, women's studies and English.

Bob Dalton, customer accounting supervisor NE, and **Buddy Umberger,** line crew supervisor NE, were installed as director and third vice president, respectively, of the Wytheville Lions Club.

Kirk, son of Linda Jennings, personnel assistant, won first place in his second grade class in the softball throw contest, 50-yard dash and broad jump during field day at Draper Elementary School.

Scott, son of Bob Kilgore, division superintendent, was selected to become a member of Phi Beta Kappa, the highest academic fraternity for students in the liberal arts and science curriculum at VPI&SU. He was also selected for Phi Kappa Phi, the only honor society at Tech which draws from all its colleges. Scott was elected an officer in Mortar Board and the Tech Trompers. He is presently doing an independent study in the economics of public education and is working with Professor Charles L. Taylor in the production of his book, ***Changing Nations in a Changing World: the Third Edition of the World Handbook of Political and Social Indicators.*** Scott, an AEP educational award winner, will graduate from Tech in March with a bachelor of arts degree in economics and will pursue a masters degree in that field or a law degree. □



Anyone interested in tracing the history of electric meters could find a wealth of information on this display board located in the Charleston meter department. William Romeo, meter superintendent, explains that over the years it has been a practice of the people in the department to save a meter when it has been discontinued and there are a limited number available. "Now," he says, "we decided to take them out of the cupboard and put them on display. Some of them date back to 1906. In the middle of the board is a plaque from Ohio Edison, telling about some of the various types of meters and their vintage. Sometime we would like to replace Ohio Edison's with an index of our own."

WEDDINGS

Conrad

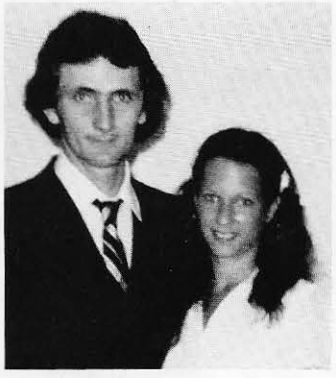
Kitts

Terry

Gibson

Derrick

Bazzie



Blankenship

Horton

Hudson

Foster

Lineberry

Faulkner

Sandra Gail Rogers to **Joseph Lewis Conrad,** Pulaski line mechanic A, June 20.

Helen Honaker, secretary-stenographer, GO T&D Administrative, Roanoke, to James G. Kitts, June 26.

Lynda Dee Floyd to **Freddie Dean Terry,** Glen Lyn Plant utility worker A, June 20.

Jarena Jan Cavender to **Mark Gibson,** Amos Plant utility worker, June 6.

Nancy Arthur, Amos Plant junior clerk, to **Robert Derrick,** Amos Plant utility operator A, June 26.

Robin Diane Winfrey to **Gary W. Bazzie,** Bluefield line mechanic D, June 20.

Carolyn Drain, electrical engineer in GO T&D Engineering, Roanoke, to Claude Dale Blankenship, June 5. Carolyn is the daughter of Clarence Drain, Glen Lyn Plant shift operating engineer.

Teresa Lynn Brown to **John William Horton,** June 12. John is the son of Preston Horton, Bluefield engineering technician.

Jacqueline Maria Horton to Robert Darryl Hudson, June 12. Jacqueline is the daughter of Preston Horton, Bluefield engineering technician.

Mary Beth Bailey to William Marvin Foster, June 20. Mary Beth is the daughter of Paul Bailey, retired Lynchburg division superintendent.

Wagoner

Johns

Tolley

Moore

Renee Laurel Eskins to **Mark Wayne Lineberry,** June 13. Mark is the son of Gene Lineberry, Bluefield general servicer.

Pamela Kay Pennington to Ben Bratton Faulkner, June 27. Pamela is the daughter of Sandy Pennington, assistant plant manager at Glen Lyn.

Lisa Faye Cave to **Jimmy Wagoner,** electric plant clerk B, GO Accounting, Roanoke, June 27.

Deborah Lynn Hayes to Joseph Johns, June 13. Deborah Lynn is the daughter of Catherine Hayes, Huntington mail clerk.

Twila Lynn Saunders to Lewis Allen Tolley, July 25. Twila Lynn is the daughter of Jerry Saunders, statistical accountant, GO Accounting, Roanoke.

Tammy Lynn Bird to **Michael Moore,** June 13. Michael is the son of David Moore, welder 1st class, Central Machine Shop.

Rose Carpenter, Lynchburg junior clerk, to Allen J. Reid, June 27.

Ann Conrad Hoopes to **Richard Loyd Calhoon,** Roanoke line mechanic C, June 20.

Susan Burns, Mountaineer utility worker, to Thomas Durst, July 5.

Cathy Mower, Mountaineer Construction junior clerk, to Brad Tufts, July 11.

Joy Hicks to **Lawrence Calhoun,** Amos Plant utility worker, June 20.

Linda Belliveua to **Ivan Powell,** Mountaineer barge handler, July 3.

Linda Preece to **Jim Saunders,** lab technician, AEP Lab, Huntington, May 24.

Patricia Wiseman to **Roy Stone,** Amos Plant harbor boat operator, June 20. □

BIRTHS

Abingdon

Brandi Nichole, daughter of **Darlene Robbins,** Clintwood customer accounts representative C, June 23.

John Amos

Markita Michelle, daughter of **Wendell Miller,** utility worker, March 29.

Beckley

Aaron Tyrel, son of **David Ransom,** Rupert engineering technician, June 15.

Bluefield

Lauren Victoria, daughter of **Kenneth Green,** engineering technician, June 19.

Nitin, son of **Paul Bhasin,** electrical engineer, July 13.

Charleston

Shanna Marie, daughter of **George Begler,** line mechanic A, June 8.

Kelly Nichole, daughter of **Anthony Sword,** line mechanic C, July 4.

Clinch River

Lacey Amber, daughter of **George Miller,** stores attendant, June 18.

Michele, daughter of **Clarence Prater,** utility operator A, June 9.

General Office

Ashley Dawn, daughter of **James Rucker,** junior clerk, GO General Services, Roanoke, June 9.

Laura Michelle, daughter of **Janet Stump,** junior clerk, GO Accounting, Roanoke, June 19.

Jennifer Lani, daughter of **Linda Smith,** tape librarian A, GO Accounting, Roanoke, July 6.

Glen Lyn

Joshua Michael, son of **Roger Dale Bradley,** performance engineer, June 18.

Huntington

Joshua Paul, son of **Ron Roush,** Point Pleasant line mechanic C, June 19.

Kanawha River

Anthony Scott, son of **Garry Smith,** equipment operator, June 15.

Kingsport

Harold Gray, III, son of **Harold Walker,** meter reader, June 27.

Mountaineer

Stephanie Anne, daughter of **J. J. Evans,** utility operator A, June 28.

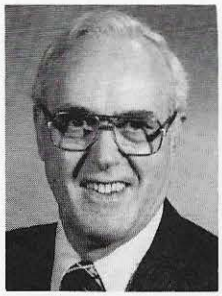
Jeffrey Keith, son of **Denny Harris,** control technician senior, June 29.

Justin Wayne, son of **Terry Damm,** performance engineer, July 12.

Pulaski

William Austin, son of **Tommy Lineberry,** Galax line mechanic D, June 27. □

SERVICE ANNIVERSARIES

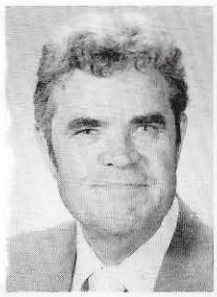


James Massie
unit supervisor
Clinch River
40 years

Charles Ross
asst. to foresty
cont. & util. supt.
GO-Roanoke
40 years

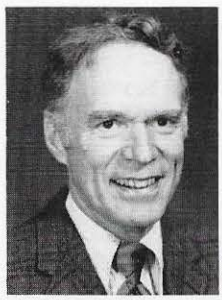
Dusty Smith
surveyor (LTD)
Pulaski
35 years

Paul Sowers
line superintendent
Pulaski
35 years

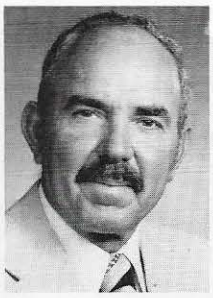


Paul Curry
station supt.
Charleston
35 years

Elmer Spencer
line inspector
Charleston
35 years



William King
instru. maint. supv.
Philip Sporn
30 years



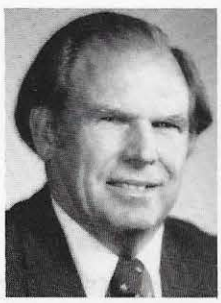
John Scott'
line crew supv.
Bluefield
30 years

Cecil Buckner
collector
Pulaski
30 years

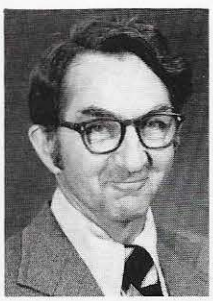
Bobby Saul
T&D office supv.
GO-Roanoke
30 years

Mack Leonard
aux. equipment op.
Glen Lyn
30 years

Clayton Starcher
meter electrician A
Charleston
30 years



Granville Patterson
garage supv. (LTD)
Lynchburg
30 years



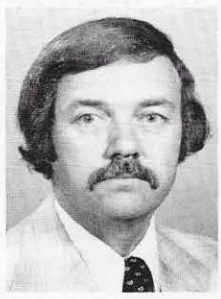
Raymond Cole
unit supervisor
Philip Sporn
30 years

Whitey Overbey
service crew supv.
Kingsport
30 years

Oscar Leonard
asst. shift op. eng.
Philip Sporn
30 years

Dwight Wallace
unit supervisor
Philip Sporn
30 years

Dallas Cadle
asst. shift op. eng.
Philip Sporn
30 years



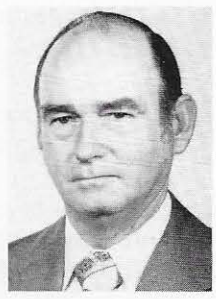
Jerry Dodson
drafter A
GO-Roanoke
25 years

Sid Freeman
utility supervisor
Glen Lyn
25 years

Earl Thornton
unit supervisor
Glen Lyn
25 years

Gene Brown
coal equipment op.
Glen Lyn
25 years

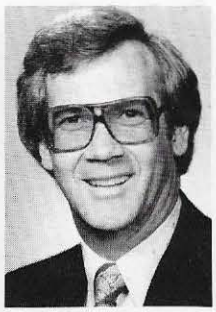
Sonny Wiley
maint. mechanic A
Glen Lyn
25 years



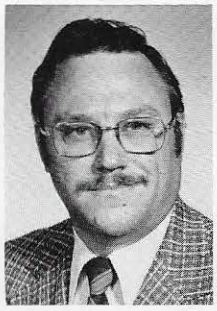
Lindy Heptinstall
station mechanic A
GO-Roanoke
25 years

Herbert Sayre
regional dispatcher
GO-Huntington
25 years

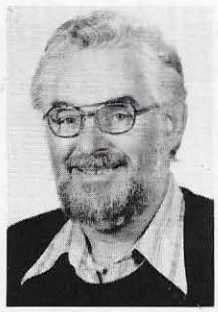
Arnie Nester
maintenance supv.
Clinch River
25 years



Gilly Gillespie
area service restorer
Charleston
25 years



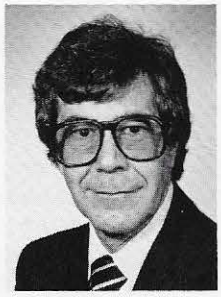
Sattis Landis
regional dispatcher
GO-Huntington
25 years



Okey Turley
trans. mech. A (LTD)
GO-Charleston
25 years

Kenneth Winter
asst. shift. op. eng.
John Amos
25 years

Curtis Graham
trans. mechanic A
GO-Bluefield
25 years



Ronald House
senior chemist
AEP-Huntington
25 years

Onsbie Yates
office supervisor
Bluefield
20 years

Elton Quarles
maintenance mech. A
GO-Roanoke
20 years

George Doak
unit supervisor
John Amos
20 years

John Amos

10 years: **Steven Parsons,** performance supervising engineer. **Maxwell Bailes,** maintenance mechanic A. **Frank Grover, Jr.,** equipment operator. **Boyd Lively,** maintenance mechanic A. **Eddie Manning,** maintenance mechanic A. **Ernest Chapman,** maintenance mechanic A. **James Richmond,** car dumper. 5 years: **Joseph Gregory,** control technician. **John Albaugh,** performance engineer senior.

Bluefield

15 years: **Rex Stewart,** line crew supervisor NE. 10 years: **James Lamb,** meter reader. **Dwight Palmer,** line mechanic B.

Central Machine Shop

5 years: **Randy McClanahan,** truck driver.

Centralized Plant Maintenance

10 years: **Robert Bragg,** maintenance supervisor. 5 years: **Ralph Thomas, Jr.,** maintenance mechanic B.

Charleston

25 years: **Don Hundley,** line mechanic A. 15 years: **Lawrence Jennings,** line mechanic A. 10 years: **Greg Pauley,** drafter C. 5 years: **Harold Wiseman,** power engineer.

General Office

15 years: **Dale Meadows,** regional dispatcher, GO-Charleston. **Vickie King,** payroll clerk A, GO-Roanoke. 10 years: **Donald Richardson,** transmission mechanic B, GO-Charleston. 5 years: **James Mullis,** transmission mechanic B, GO-Bluefield. **Roger Jones,** commercial engineer, GO-Roanoke. **Jeffrey Whitehead,** transmission mechanic B, GO-Bluefield.

Huntington

10 years: **Gary Bailey,** line mechanic A. 5 years: **Mike Cooper,** line mechanic B.

Kingsport

10 years: **Gale Chase,** line mechanic A. 5 years: **Johnny Chandler,** line mechanic B.

Lynchburg

15 years: **Harry Hughes, Jr.,** line crew supervisor NE. 10 years: **Marjorie Holley,** customer accounts representative B.

Mountaineer

10 years: **Janice Adkins,** secretary-stenographer.

Mountaineer Construction

15 years: **Bob Adams,** resident engineer. 5 years: **David Roach,** receiving/shipping inspector II.

Pulaski

15 years: **Larry Rakes,** customer services representative. **Gene Musser,** area service restorer. 5 years: **Regina Isom,** customer accounts representative C. **Bill Akers,** line mechanic B

Roanoke

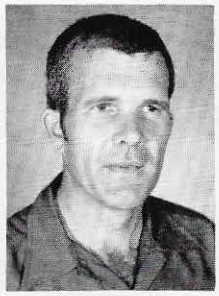
20 years: **Abner Jacobs,** meter reader. 15 years: **Ronald Switzer,** line mechanic A. 5 years: **Donna Bennett,** telephone operator.

Philip Sporn

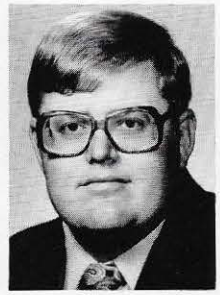
15 years: **Norman Hysell,** maintenance mechanic A. 5 years: **William Plantz,** equipment operator. **Curtiss Matheny,** maintenance mechanic B. **Wayne Staats,** maintenance mechanic B. **Robert Stewart** maintenance mechanic B. □

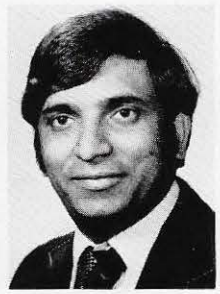
PROMOTIONS


VanMeter


Musser


Poff


Duncan


Kanth

John K. VanMeter, maintenance mechanic A, was promoted to maintenance supervisor for Centralized Plant Maintenance on May 1.

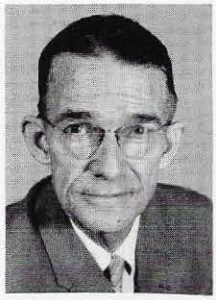
Gene Musser, area service restorer, was promoted to line crew supervisor nonexempt in the Hillsville area of Pulaski Division on July 11.

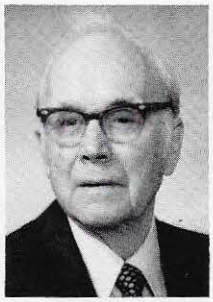
Ronald Poff, civil engineer senior, GO T&D Station, was promoted to distribution staff engineer, GO T&D Engineering, Roanoke, on July 1. He holds a bachelor of science degree in civil engineering from Virginia Polytechnic Institute and State University.

Mark Duncan, performance engineer, was promoted to performance engineer senior at John Amos Plant on June 1. He holds a bachelor of science degree in mechanical engineering from West Virginia Institute of Technology.

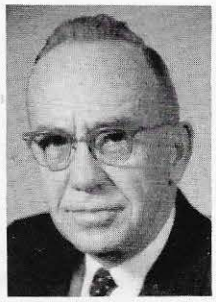
Hrudaya Kanth, performance engineer, was promoted to performance engineer senior at John Amos Plant on June 1. He holds a bachelor of science degree in chemistry from West Virginia State College and is working toward a masters degree in business administration at Marshall University. □

FRIENDS WE'LL MISS


Thompson


Frier


Peters


Brendel

Fitzhugh Lee Thompson, 82, retired Charleston stationman C, died July 11. A native of Charleston, he began his career in 1929 as a meter reader and retired August 1, 1963. Thompson is survived by his widow Gertrude, 533 Daughterty Street, Charleston, W.Va.; one son and two daughters.

Jack Blair Frier, 68, retired Abingdon personnel supervisor, died July 12. A native of Salem, Virginia, he was employed in 1937 as a clerk in Roanoke and retired April 1, 1978. Frier is survived by his widow Sarah, 128 Crestview Drive, Abingdon, Va.; one son and two grandchildren.

Coy L. Peters, 64, retired Roanoke auto mechanic A, died June 23. A native of Ferrum, Virginia, he joined the company in 1945 as an auto mechanic helper and elected early retirement May 1, 1980. Peters is survived by his widow Edna, Route 1, Box 302, Boones Mill, Va.; two daughters and one son.

Alvin Brendel, 82, retired Charleston personnel assistant, died July 9. A native of Norwood, Ohio, he began his career in 1923 as a stenographer and retired July 1, 1961. Brendel is survived by his widow Mary, 5005 Georgi Lane, Houston, Texas, and two daughters.

William Slappee, 91, retired Charleston general serviceman, died July 14. He began his career in 1913 as a lineman and retired November 1, 1953. Slappee is survived by seven sons and two daughters.

Harry Ellis, 70, retired Cabin Creek Plant mechanical maintenance man, died June 28. A native of Davis Creek, West Virginia, he was employed in 1929 as a laborer and took disability retirement November 1, 1956. Ellis is survived by his widow Dorothy, Harmoney, West Va., four sons and four daughters. □

There's something special about a handmade guitar

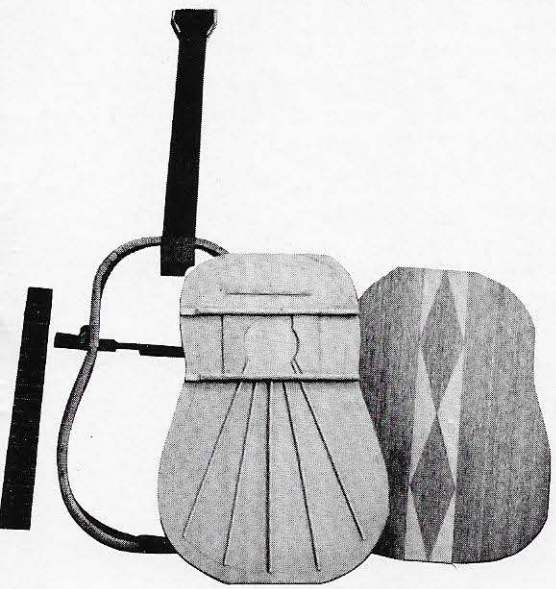
As far back as Lefty Weatherly can remember, music has been an important part of his life. Had he not tired of traveling, Lefty might still be on the road, playing with his country and western band, the Green Valley Boys. But in 1951, after 12 years on the circuit, Lefty decided he'd had enough and settled down to a job at the Glen Lyn Plant.

At Glen Lyn, Lefty, maintenance mechanic A, teamed up with Buddy Thompson, unit supervisor, and the pair performed for Christmas parties and anniversary dinners throughout the Appalachian System for several years. Presently, Lefty plays with a gospel group at the Freewill Baptist Church in Oakvale, W.Va.

In 1978, Lefty decided to combine his love for music with his talent for working with his hands. The result? A beautiful handmade guitar with a tone to match.

Lefty says, "I have played this guitar along side some of the highest priced guitars and not told anyone it is handmade. When people hear it, they always come up and ask me what kind of a guitar it is. It's three years old now, and the tone gets better all the time.

"I have a Gibson guitar that I don't even play anymore because I like the one I made so much better. You can order custom made guitars, starting at about $500. But I have less than $70 in this one, not counting labor.



Some of the components of a fourth guitar Lefty Weatherly has under construction are shown above.

Lefty Weatherly combined his love of music with his talent for working with his hands to make this guitar.

How does one go about making a guitar? Lefty says, "I got some literature and studied up on it before I tackled my first guitar (he's made three). Once you build one, you don't have to go back to a book to see how.

"A beginner should start on a less expensive wood, so I started on maple. The top (sound board) is made of Alaskan Spruce, the neck is Honduras mahogany, and the fret board is Brazilian rosewood. Once the mahogany is seasoned, it won't warp, and the rosewood fret board is hard enough for finger work.

"The first thing you have to do is make a mold. The sides for the guitar have to be boiled in water for one hour. Once the wood is boiled, the characteristics of it change. I dress the wood down to the thickness I want and then both sides are clamped together on the mold and left for a week to dry. When you take the sides off, they stay the shape of the mold.

"The hardest part of making the whole guitar is getting it on scale. If it isn't on scale, it isn't worth a nickel. You take the length of the vibrating surface of the string, divide it by 18 and locate the first fret. Then you take the remaining length, divide that by 18, on down until you locate the last fret. And, too, each brass in the sound board has to be precisely in the right place. The only machines that have been used on this guitar are a drill and a sander. The rest was done by hand."

Even the shine was put on by hand. First the instrument was covered with two coats of guitar varnish. "You have to wait about 18 months before you put the final varnish on," Lefty says. Then the shine was put on with plain water and a lot of elbow grease. The wood is waterproofed and the moisture won't go in it.

"I want to make the best guitar I can possibly make before I quit," Lefty adds, "but I'll always keep this first one in the family. Right now, no one else in the family can play. But just maybe someone on down the line will be able to pick it." □

Servicer rescues $1,200 macaw

Robert, the star attraction at "Just Us and More Pets" in Charleston, West Virginia, had just finished his dinner of sunflower seeds and water when he decided to flex his wings and take off. After carefully surveying the others in the shop, Robert dashed out the door to freedom, only to find himself atop a tree thousands of miles from his native South America.

While the blue and gold macaw was calmly taking in Charleston's west side from his perch, his owners, Elizabeth and Dan Justice, were trying to figure out a way to stop the $1,200 bird from heading south.

The Justices called the police, the fire department, the animal shelter, even the mayor, but no one knew how to coax the macaw off his perch. "There isn't much we can do", one policeman said. "We don't get things out of trees, worry about flying saucers or what have you."

By midnight, Robert was still refusing to listen to the Justices' pleas to return, and Mrs. Justice was getting ready to "cause a public disturbance" to attract the attention of city officials. Before that was necessary, however, Marvin Dillard, Charleston general servicer, came to the rescue with a cherry picker. As it turned out, Marvin was on his way back to the service center from a trouble call when a call about the bird came into the dispatcher.

Robert, the macaw, is safely back inside a pet shop in Charleston, thanks to Charleston General Servicer Marvin Dillard, right.

By 1 AM — five hours after he flew the coop — Robert was netted and pulled to safety.

"I'm going to pay my electric bill on time for the next 20 years," the relieved shop owner said. □

Story courtesy ***Huntington Herald Dispatch.***

THE ILLUMINATOR

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