

nuclear news

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Vince Boyer
ANS president

Vince Boyer: Utility man gone nuclear

Vince Boyer is only the second utility man* to be elected president of the American Nuclear Society. That so few ANS presidents have come from the ranks of utilities may seem surprising in view of the central position utilities occupy today in the implementation of nuclear power. It must be remembered, however, that the commercial application of nuclear power is still relatively young and that in the earlier reactor development phase (which, of course, still continues) much of the talent was concentrated in vendor organizations, national laboratories, and other government installations, although important assists were given by utilities and universities.

Unlike so many of his predecessors in the ANS presidency, Boyer was never involved in the Manhattan Project, never was in "the nuclear Navy," never worked at a national laboratory, and does not hold a nuclear engineering degree. Despite all this, Boyer is very much a nuclear man and, without doubt, is representative of many who will rise to prominence with the increasing commercialization of nuclear power.

Boyer has been a one-company man throughout his career, joining the Philadelphia Electric Company upon graduation from Swarthmore College in 1939 with a BS in mechanical engineering and rising from the lowly ranks of the company's cadet training program to his present position of vice president of the utility's Engineering and Research Department. The department, which employs 1300 people, including about 400 engineers, is responsible for the planning and installation of new capacity. In its research function, the department performs some in-house research on a modest basis and stays in touch with work going on at the Electric Power Research Institute and other research organizations around the world.

*The first was Louis H. Roddis, Jr. (1969-70). Unlike Boyer, however, Roddis did not become a utility man until relatively late in his career, after several years of government service, first in the U.S. Bureau of Ships under Adm. H. G. Rickover and subsequently in the Atomic Energy Commission. He entered the utility business at the level of president of Pennsylvania Electric Company and later held the same position with Consolidated Edison Company of New York.

Boyer's rise to positions of increasing responsibility over his career at PE may be credited in part to his being "in the right place at the right time," but more likely, his advancement has been due to a mixture of intelligence and hard work. At 58, Boyer is a spare, wiry man, who keeps trim by the zealous pursuit of his favorite pastime, golf. In his approach to work, he is energetic, setting a fast pace for those around him. One of his associates calls him "the Boyer Banger" in reference to his rapid-fire approach to a given project.

If intelligence and industry were abundant in Vince Boyer, he found in Philadelphia Electric Company an innovative, energetic establishment in which to employ his talents. The company has long been recognized as a leader in the application of new technology, and this certainly has been true of its role in the development of nuclear energy as a commercially viable source of electricity generation. Among the nuclear projects of the company are the following:

- Peach Bottom, the first high-temperature gas-cooled reactor demonstration plant in the United States (of which Boyer was the first superintendent).
- Peach Bottom-2 and -3, a pair of 1065-MWe boiling water reactor units placed in commercial operation in 1974.
- Limerick-1 and -2, a pair of 1065-MWe BWR units now under construction and scheduled for commercial operation in 1983 and 1985, respectively.
- Finally, the now-canceled Fulton station where two 1160-MWe HTGR's had been envisaged until General Atomic Company, the reactor supplier, pulled out of the agreement. (See *NN*, October 1975, p. 21; November 1975, pp. 26 and 112.)

In addition, the company holds a 42 percent ownership in the Salem station, consisting of two large pressurized water reactors, now under construction by Public Service Electric & Gas Company. (The New Jersey utility holds a similar share in the ownership of PE's Peach Bottom-2 and -3.) The first unit at Salem is expected to come on line late this year, with the second following in mid-1979.

By the time the Limerick units are in service, the company's nuclear



The "Boyer Banger" in a relaxed moment

capacity will be close to 4000 MWe, which should yield over 50 percent of the company's output at that time. This strong commitment to nuclear power has come about under the leadership of men like the late Roy G. (George) Rincliffe, former chairman of the board; Robert F. Gilkeson, present chairman and chief executive officer; James L. (Lee) Everett, president; and, of course, Vince Boyer. Together they and many others have fashioned a creditable history of success in nuclear power, and in the rest of this biographical article we will examine the part that Boyer played in that history.

Early inclinations

Vincent S. Boyer was born the second of two children, both sons, to Philip A. and Gertrude Stone Boyer. Both parents were educators. Boyer's father was with the Philadelphia school system for about 45 years, 25 of them as director of educational research. His mother, prior to the birth of her first child, was an elementary school teacher. The Boyers lived in north Philadelphia, where Vince spent an active



Four-year-old sailor

boyhood, what with scouting (he attained the rank of Eagle Scout), sports, caddying, and selling and delivering magazines and newspapers with his brother Philip.*

From early youth Vince showed a knack for taking things apart and putting them back together again, and when it came time near the end of high school to make some choices about a career, he had no inclination to follow in the family tradition by becoming an educator, but thought instead that he would go either into business or into engineering. He was advised that it was easier to change from engineering to business than vice versa, and so he set his mark on engineering. As it turned out, his career has proved him to be an excellent engineer, an efficient businessman (manager), and, as we shall see, an occasional educator.

Preparing for a career

With the help of a partial scholarship, Boyer went to Swarthmore College in pursuit of a bachelor of science degree in mechanical engineering. On the way to that objective, which he reached in 1939, he participated actively in intercollegiate sports, principally golf and soccer. In his freshman year he was the sixth man on a six-man golf team. He played in the low 80's at that time. On the soccer team he played the position of left halfback, reaching the varsity team in his junior and senior years. Participating in the tough Middle Atlantic States League—with teams from Penn, Princeton, Lehigh, Lafayette, and others—he won an All American Mention in his senior year.

* Philip Boyer, two years older than Vince, graduated from medical school at the University of Pennsylvania, spent most of his career in the pharmaceutical business and presently is medical director in a retirement home near Kansas City, Mo.

Not all of Boyer's energies were devoted to studies and the playing field, however; he was also impressive on the dance floor (and, by all reports, still is) where more often than not his dancing partner was a fellow undergraduate at Swarthmore, Ethel Wolf, the girl he would marry three years after graduation.

Boyer's first experience with Philadelphia Electric Company came during the summer between his junior and senior years when he obtained a job as an electric construction mechanic's helper on the construction of an addition to a generating station. He enjoyed the work, and so when he was graduated, he applied for a job with the company and was accepted into its cadet training program in July 1939. After one and one half years in this two-year program, under which the cadets move from department to department to gain familiarization with the company's operation, Boyer was given the opportunity to take an assignment as a test engineer at the Chester generating station, where an addition was being built. This was late in 1940, just when the United States was being mobilized for World War II. Boyer had completed most of the cadet training program, missing only involvement in distribution and overhead lines, and so he took the job.

On the job

The original Chester station was built in about 1916 with four low-pressure units. The new unit was of a higher pressure than the utility had in use at that time, and it involved pulverized coal firing, which was new to the station. It included a new 100-megawatt

low-pressure unit and a topping turbine of 50 megawatts exhausting to a header system. Boyer was one of two engineers assigned to the new addition. Their responsibilities were principally in the adjustment and maintenance of the automatic controls, seeing to the overall efficiency of the station. Looking back on the experience, he sees that it was a good way to learn the power business, since much could be learned at the end of a construction period during the placing of new equipment into operation—with all the trials and tribulations that this process involves. During this period his innate teaching skills came to the fore, since some of his responsibilities included the writing of descriptions on new equipment and the preparation of training sessions for the operators.

While at Chester, Boyer continued in his own formal education pursuing a master's degree in mechanical engineering with a concentration on electrical engineering. He received his MS in 1944 from the University of Pennsylvania. During this period he also found time to participate as a teacher in a government-conducted Engineering Science Management War Training Program at Sun Ship Company in Chester. Designed to help workers responsible for installing power plant equipment in ships, it was a basic course in boilers, turbines, etc. Developing the course material was an educational experience for Boyer, and in the process he was earning some extra money.

The added income came in handy, too, for Boyer was accumulating new responsibilities. In 1942 he married Ethel Wolf, and in August 1944 the first of their three daughters was born. Her arrival came just three days before her father entered military service.

A naval engineer

Boyer had enrolled for a commission in the Navy, received the commission as ensign, and, just after the blessed event on the home front, went to Princeton for a three-month indoctrination period. He had applied for duty as an engineering or maintenance officer, but when the appointment came through, it was for a deck officer, there being no need at that time for additional engineering or maintenance officers. And so Boyer completed indoctrination at Princeton as a deck officer and went on to advanced indoctrination at Hollywood Beach Hotel, near Fort Lauderdale, Fla., for three months. From there he was assigned to Norfolk, Va., for training on destroyers.

Still nettled over being thwarted in his attempt to work as an engineer, Boyer asked, on his arrival at Norfolk,



Young marrieds Ethel and Vince

if he could be transferred to engineering on the basis of his background. After a check was made on his record of employment at PE, the Navy came back with the question "Are you ready to go to sea?" Boyer answered in the affirmative and was sent out as a replacement for an engineering officer on an operating destroyer, the *Endicott*. The replacement was ironic in that Boyer, who had not received any special training in naval ship propulsion other than that received during indoctrination as a deck officer, was replacing an engineering officer who needed further training. But he gladly accepted a tour of duty of four months on the ship, commanded by Capt. John Buckley, who had earlier gained fame in



Ensign Boyer: Destroyer duty

taking General MacArthur out of the Philippines in a PT boat. The high point of his experience on the *Endicott* came when the ship served as escort over part of the journey of the cruiser *Quincy* as it carried President Roosevelt to and from the Yalta Conference.

Boyer returned to Norfolk after this duty and was assigned to new ship construction as an assistant engineering officer. He was involved in the training of ship's crew for a new destroyer, the *Ellison*. He worked on that project for almost a year, completing a shake-down trip just as the war ended. By then he had worked up to the position of engineering officer of the ship and was a lieutenant junior grade when he left the service in April 1946.

Resuming a career

On his return to Philadelphia Electric, Boyer went back to the Chester

station, where he worked as engineer with responsibility for the maintenance and operation of the boiler room. In 1950 he was selected for transfer into the Engineering Department to work on the design of the Cromby station, for which he would serve ultimately as assistant superintendent. This was a new station consisting of two pulverized-coal-fired units, one of 150-MWe and the other of 225-MWe capacity, the latter incorporating the largest generator available at that time, a Westinghouse unit.

Boyer was in on the discussions as to selection of the equipment, arrangements for its installation, and other details that amplified his understanding of power plant design and construction. More specifically, his was the job of selecting and training operators for the new station, and in this area he wrote a set of "discussions" to describe the purpose of the equipment, its manner of operation, and operating precautions. It was an arduous task for the young engineer, but it was an impressive achievement, growing to a thick volume by the time it was completed. It demonstrated Boyer's ability to put into meaningful terms the information operators would need during operation of the plant. The process of completing the volume also gave him a full acquaintance with the equipment.

Going nuclear

Boyer's growing expertise and appetite for responsibility were not lost on his superiors at Philadelphia Electric. Thus, when the need arose for competent men to take up responsibilities in the company's growing involvement in nuclear power developments, he was among those on tap. Also in his favor was the fact that he had taken a course in nuclear power on his own initiative at the Engineers Club of Philadelphia.

The company began to show interest in nuclear power under the chairmanship of George Rincliffe. It donated the services of many of its best engineers in several early nuclear endeavors. Bob Gilkeson, who joined the company at the same time as Boyer, worked for about five years on loan to Westinghouse in connection with the Nautilus prototype in Idaho, and Lee Everett worked at the Fermi experimental breeder reactor plant in Michigan, helping in the design of the fuel for the reactor.

Also involved was Robert Liversidge, PE's vice president of Operations, who was on the Operations Review Committee for Fermi. It was Liversidge, in fact, who was instrumental in the appointments of two men whose careers at PE have run in close parallel: Vince Boyer and John Kemper.



Aspiring engineer at Cromby station

In 1960 Kemper, who had worked at the Cromby station as a test engineer under Boyer, was selected to go to the Fermi station as a shift supervisor, still remaining a PE employee while working in this cooperative industry project built and operated by Detroit Edison Company. In the same year Boyer was named superintendent of the Peach Bottom Atomic Power Station, and thus his nuclear career began in earnest.

The Peach Bottom plant came about as a result of the company's involvement in a utility group known as the High Temperature Reactor Development Associates, whose bid to build a gas-cooled reactor under the AEC's Power Reactor Demonstration Program was accepted in the late 1950's. Originally, it was contemplated that this first U.S. gas-cooled demonstration plant would be built on the Southern California Edison system, but just prior to the implementation of this plan, the Edison management said it wanted to wait until a larger nuclear plant could be built, saving its capital for that. The HTRDA asked if someone else from the group would take the plant on, and Rincliffe agreed.

PE paid some \$8 million for the 40-MWe plant, which came to about \$200 per kilowatt, just a little more than the utility would have paid for a conventional plant of that size at that time. (This was in addition to the company's contribution to the HTRDA.) The company owned and operated the plant, while the group of utilities contributed to the research work. The research money went to General Atomic, then a division of General Dynamics Corporation, San Diego, Calif., which designed and built the plant with Bechtel

Corporation under a fixed-price contract.

The company's commitment on Peach Bottom was made at the end of 1959, and Boyer's appointment as superintendent came on January 1, 1960, giving him ample time to perform his essential task: getting himself trained, assembling a group of people to run the plant, and seeing that they were trained properly. To achieve the first of these objectives, Boyer enrolled in a nuclear reactor engineering course at the University of Pennsylvania and in a laboratory course at Drexel Institute. Later, in 1962, he went to Shippingport for a four-month training program conducted on behalf of the AEC to train nuclear power plant supervisors. (Kemper, too, had taken this course prior to his work at Fermi.)

In addition to developing the plant organization and training program for the operating force of Peach Bottom, Boyer and his technical staff participated in the design of the plant, integrating their operating experience into plant features. Boyer made a series of trips to General Atomic for this purpose, including two summer-long sessions in 1960 and '61. During these visits he became acquainted with the theory of the core that would be used in the plant and was able to offer input on such matters as control board arrangement, equipment arrangement in the plant, operating and maintenance considerations, control systems, and other areas of design.

Those two summers were also memorable ones for the Boyer family, since Vince's wife and three daughters, by then ranging in age from 10 to 17, accompanied him to San Diego and enjoyed thoroughly their first ventures through the West.

Boyer and Kemper kept in constant communication through this period on their respective activities at Peach Bottom and Fermi. When it later developed that Fermi encountered some delays, Kemper joined the group of PE engineers at General Atomic before moving to the Peach Bottom plant.

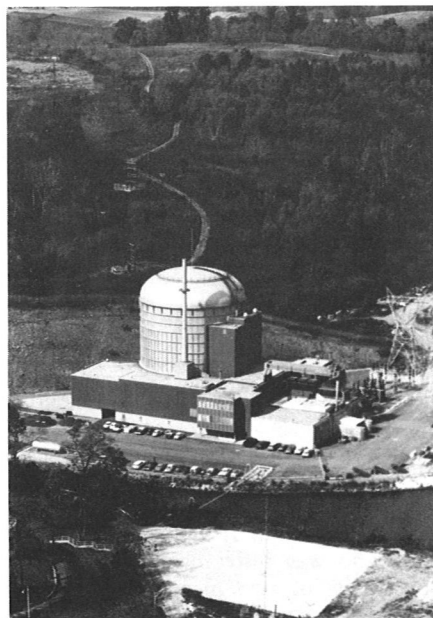
Preliminary construction had started on Peach Bottom by 1961, and by 1963 it was well enough along so that the company was preparing to get some of its operating force down there to follow the construction of the plant. At this time Boyer's job was changed to manager of nuclear power, a new position in the Operating Department. He was succeeded as superintendent of Peach Bottom by Kemper.

In his new position at the company's Philadelphia headquarters, Boyer continued to direct and review the plant startup program and served as chairman of the Operation and Safety Re-

view Committee, setting policies that contributed to the unblemished safety record of the Peach Bottom plant. During this period Boyer became the primary contact with the AEC for the utility, meeting with the agency's representatives, answering their questions, going to licensing hearings, and so forth.

The Peach Bottom plant was successfully placed in commercial operation in 1967 and, operating safely and efficiently for seven years without any undue maintenance problems, proved the physics of the gas-cooled reactor, in Boyer's estimation. "Certainly it was the cleanest nuclear power plant in the country," he contends. Radiation releases and the activity in the primary system were extremely low. This is not to say the plant had no problems. After it had run for 450 full-power days, only half the expected life of the first core, fuel kernels were discovered to have failed so as to crack the sleeves, and so the core had to be replaced at that time. The second core, however, ran the full 898 days expected, and very little activity was noted at the end of that run. The plant had no maintenance problems, good reliability and availability, no trouble with circulators, good operating flexibility, and achieved high pressure and high quality of steam (1000°F, or 538°C). Moreover, the integrity of the fuel and the effectiveness of the fission product trapping system were proved.

This experience with Peach Bottom gave the company confidence that the 330-MWe Fort St. Vrain project would prove successful (although at this writing that plant, owned and to be operated by Public Service Company of Colorado, has yet to go on line). On the basis of this optimism, the company



Peach Bottom: Nuclear entry

made its commitment to build the Fulton station, only to see this project come to naught when GA reneged on the agreement.

Up the ladder

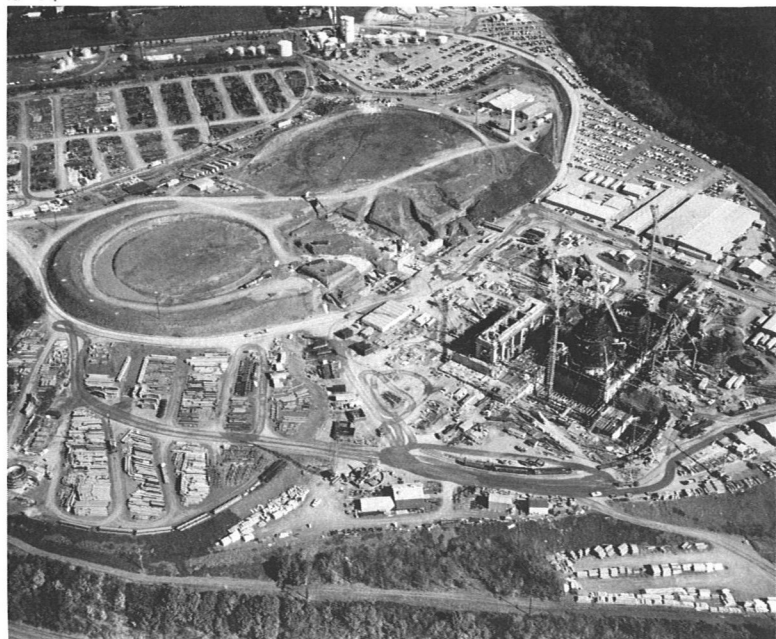
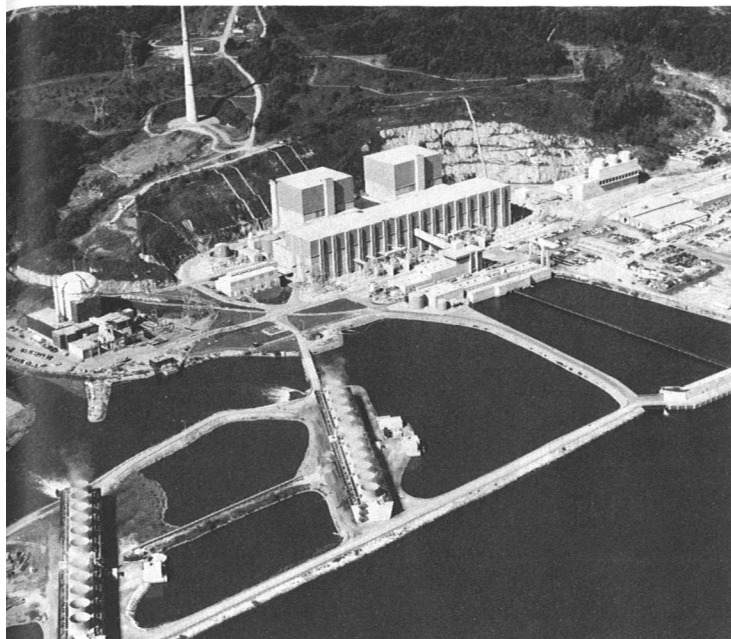
In January 1967 the position of manager of nuclear power was terminated, and Boyer moved over to general superintendent of the Operating Department. In this position he still had responsibility for Peach Bottom as well as for the fossil units. In the following year he was promoted to the position of manager of Electric Operations, and in 1969 he was promoted to vice president of the Engineering and Research Department, his present position. This job had previously been held by Everett, who moved up to become executive vice president and later president of the company, with Gilkeson going from president to chairman of the board and chief executive officer. As Boyer moved up, by the way, so also has Kemper, who now serves as manager, under Boyer, of the Engineering and Research Department. The vice president/manager tandem ("one on one") arrangement is employed throughout the PE organization.

During these years of moving up the ladder Boyer has supervised the licensing and construction of the BWR facilities, supplied by General Electric Company, for Peach Bottom-2 and -3 and for the Limerick station. The Peach Bottom units went into service in 1974, completing their first full year of operation in 1975, contributing 16 percent of the company's total output even though they constitute only 12 percent of its total generating capacity. This was in spite of the fact that in July of that year they were limited to about 50 percent capacity until the correction of vibration of monitoring devices within the reactor, a problem common to several such reactors and first noted in the Fukushima plant in Japan. The corrections were made, and both plants have returned to full service.

The Limerick plant was authorized just about the time of Boyer's elevation to the vice presidency. He has seen it through its licensing process, and construction is now about 20 percent complete. It now faces the problem of being kept on schedule in a period of financial strain. The schedule has just been stretched out an additional two years beyond its earlier postponement (see story in this issue, p. 38). For fill-in requirements, the company has had to put in two oil-fired units at the Eddystone station.

Views on the industry

Concerning the general outlook for the energy supply business, Boyer char-



PE nuclear properties: the Peach Bottom complex (left) and Limerick under construction

acterizes it as "a can of worms." It's hard to be optimistic about the energy situation, he says, stating that it will be difficult in the next few years to maintain a construction program and, at the same time, reasonable earnings. PE's loads have been flat lately, he says, but it now appears that some of the industrial loads may be coming back and the company will soon know just how much recovery there will be. The conservation ethic, he says, is having a greater effect than many first thought it would, so that the rate of growth may not be as great as in the past. Right now the company has plenty of reserve out through three, four, or five years, but if the load comes back quickly, the problem the company will face will be not this year or next year but the years after that. It may have to put in some gas turbines on a short-term basis to meet any rapid expansion.

As for the nuclear industry, Boyer acknowledges that it has been in a difficult position, what with poor economic conditions and the drive for moratoriums in various states. Still, the fossil plant market has been almost as seriously affected by the poor economic conditions as the nuclear plant market has. With sulfur dioxide removal systems, fossil plants cost about 80 percent of the cost of a nuclear plant, so that one is really only talking about marginal effects in comparing the two, he says.

Boyer regrets the withdrawal of General Atomic from the commercial market as a result of the recent depressed state of the economy and still feels that development should continue in gas-cooled technology. He believes that a utility group like the HTRDA should

be formed again and should be representative of the utility industry with sufficient membership so that upon working out a new optimization study on a large-scale HTGR there would be a good climate of acceptance for the reactor. He thinks that now is the time to get the design firmed up so that when conditions are right again for new additions to capacity, the reactor will be ready for adoption. Minimal support by the U.S. Energy Research and Development Administration and by EPRI are needed, he believes, until nuclear orders resume their historical pace.

Goals as ANS president

In his year as president of the American Nuclear Society Boyer hopes to induce members to grapple with problems in two major areas: (1) public acceptance of nuclear power and (2) the nuclear fuel cycle. As for the first of these, he sees the need for increased communication with the general public on the benefits of nuclear power and the comparative risks of nuclear power and other activities in today's world. He believes that many of those opposing nuclear power are doing so in an effort to prevent industrial growth and energy growth. He further believes these people haven't thought things through enough to see that a lack of energy growth and industrial growth will affect future generations and will affect others who are not so well off as they are. He lays much of the blame for public apprehension concerning nuclear power on the sensationalism of the general press and feels that members of the nuclear community must be zealous in responding to articles that

give an unfair representation of nuclear power. He himself often writes such letters and also has appeared on radio and TV programs to give what he considers a balanced view of the energy question and to counter the arguments of critics.

On the matter of nuclear fuel cycle, Boyer believes the Nuclear Regulatory Commission has not responded in a sufficiently timely manner to the problems posed by the back end of the fuel cycle and the needs of the industry with respect to these. He does see some reason for optimism, however, in the recent moves by the NRC to accelerate the schedule of hearings on GESMO (generic environmental statement on mixed-oxide fuels). He believes the radioactive waste disposal problem to be a highly overrated issue, but one capable of creating great emotional concern. He contends that the NRC didn't move fast enough on it because it saw no great timely need for action, believing it could go through the general environmental review before resolving the issues. Meanwhile the utility industry has had to obtain additional storage for spent fuel and suffer the economic loss of holding recoverable fuel in inventory.

On these issues and on the issues of plutonium use, safeguards, and security, Boyer believes the industry should keep urging the NRC to stay on schedule in resolving these matters. This also goes for the future provision of adequate enrichment capacity. Short of recommending that ANS become a lobbying agency—he sees no need for this—Boyer would like to see a member information effort carried on within ANS to alert members to important timely

actions where their influence might be felt.

Standards activities

Boyer has long contributed to the development and advancement of standards in the nuclear industry. He has served as the ASME representative on the N45 Committee, and through Edison Electric Institute he was that organization's representative on the Nuclear Technical Advisory Board (NTAB) of the American National Standards Institute. He is currently a member of ANSI's Nuclear Standards Policy Committee and for the past two years has been chairman of the Funding Committee of the latter group, being committed to finding some formula to provide the funding needed to support standards work on an equitable basis among utilities, vendors, professional societies, and ANSI. A broad base of support for the standards effort, he believes, is essential.

Boyer's involvement in ANS activities started in about 1960, when he was appointed superintendent at Peach Bottom. He became a member of the Reactor Operations Division, eventually becoming chairman of that division in 1971-72. Among other ANS activities, he has served as a member of the Honors and Awards Committee and the Nominating Committee and served as general chairman of the ANS Annual Meeting held in Philadelphia in 1974. He has just been named a Fellow of the Society.

Boyer is also a Fellow of the American Society of Mechanical Engineers and is past chairman of the Philadelphia Section. He has served on many industry committees, including the Enrico Fermi PRDC Engineering Committee, the EEI Nuclear Task Force, the Pennsylvania State University Nuclear Engineering Department Industrial Participation Advisory Committee, the

Argonne National Laboratory Applied Physics Division Review Committee, and the Power Generation Committee of the Association of Edison Illuminating Companies. He is a member of the Franklin Institute and of the Union League in Philadelphia.

An active communicator, he has given a modest number of technical papers, but participates often as a speaker or panel member before industry, student, and general public audiences.

At home with the Boyers

The Boyers live in a comfortable, two-story stone home in Wynnewood, an attractive suburb of Philadelphia noted for its curving streets and rolling terrain, ablaze in late spring with dogwoods and azaleas in bloom.

Ethel Boyer is a convivial, energetic person, very active in local affairs, especially hospital work. She has served as president of the Women's Auxiliary Board for Lankenau Hospital in Philadelphia. Another favorite occupation is her work in the Women's Auxiliary of ASME. After years of involvement in the local Philadelphia section, she was elected chairman of that organization and later president of the National Board for 1974-75.

At Swarthmore Ethel majored in history—it came naturally, since her father, Morris Wolf, was head of the history department at Girard College in Philadelphia. She is an avid reader, enjoying works of history, science fiction, and many other subjects.

The Boyer daughters—Ruth, 32, Suzanne, 29, and Sandra, 25—have all gone into medical or paramedical careers. Ruth, whose husband is just now completing medical school, has been working as a physical therapist in a hospital in suburban Philadelphia. A holder of a master's degree in French, she worked for a time in the federal



The Boyer girls (l-r): Ruth, Sandra, Ethel, and Suzanne

Vista program, helping disadvantaged people in Tennessee.

Suzie, who also participated in the Vista program in Tennessee after her graduation from Tufts University, is married to a young lawyer and lives presently in Boston, where she has just completed her first year in the pursuit of a doctor's degree in public health service and preventive medicine at Harvard University. She received her master's degree in this field from Cornell University.

Sandra, single, attended Vermont Junior College and subsequently taught at a nursery school for a couple of years. She is now working at the hospital of the University of Pennsylvania on an operating floor as a coordinator for scheduling operations and as a secretary to doctors.

And so it has been a good life for Vince Boyer, having raised three fine daughters and having achieved the satisfaction and rewards of a dedicated career. He also enjoys the luxury, now that his girls are all grown, of playing golf just about every weekend, even in the winter as long as it's not freezing. Ordinarily he plays either at PE's own course or at Aronimink in Newton Square. In 1969, before joining Aronimink, he won the club championship at PE. His game has improved steadily over the years. Last year at Oakmont (near Pittsburgh), site of the U.S. Open, he needed only 23 putts for 18 holes, scoring a total of 77. His all-time low, however, was a 69 scored at Aronimink.

The problems of the energy supply industry and of the nuclear industry are great indeed, and Vince Boyer may well be just the kind of person to cope with them, but out on the golf course, it must be nice just to concentrate on getting that little white ball in the hole. —C.F.



Golfer Boyer receives PE club champion award in 1969 from president Lee Everett while the previous champion, R. English, looks on