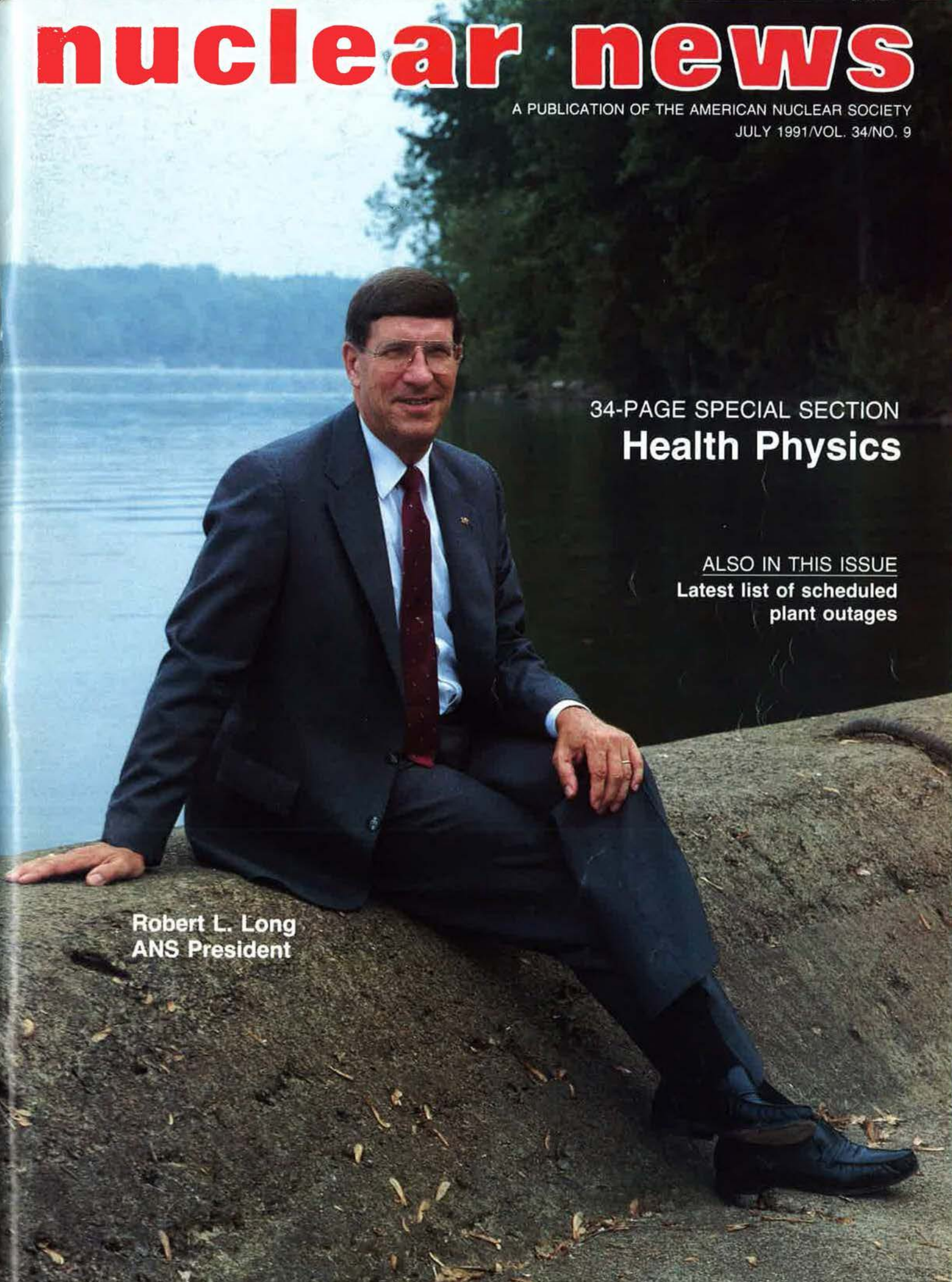
nuclear news

A PUBLICATION OF THE AMERICAN NUCLEAR SOCIETY
JULY 1991/VOL. 34/NO. 9



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Robert L. Long
ANS President

ANS President Long: "I can do that"

Last spring, Robert L. Long, the new ANS president, gave a talk at the ANS Student Conference at Purdue titled "I can do that: A look at one nuclear engineer's career." In this talk, he described the twists and turns of his career, emphasizing that his attitude toward each change has been: "Well, it's not what I planned, but I can do that." This "can-do" attitude has served him well in both his professional and personal life, and we'll probably see evidence of it during his year as ANS President as well.

Getting started

Bob was born on September 9, 1936, in the mountains of central Pennsylvania—in a small town called Renovo, where his father, John Leroy Long, had also been born. Leroy Long worked as a yard master for the Pennsylvania Railroad. Bob and an older sister grew up in Renovo, attending public schools. His parents lived in the town until their deaths, his father in 1971; his mother, Mary Geraldine, in 1987.

"Renovo is a very pretty town," Bob notes. "My mother would talk about standing on the river bridge, and no matter what direction you would look, you were surrounded by mountains. It was a great place to grow up."

Bob was the person we all idolized, envied, or hated in high school: senior class president, captain of the basketball team, and the boy voted most dependable and most likely to succeed. His girlfriend for the final two years of high school (and through college) was a childhood friend named Ann Gullborg. "Ann and I go way back," Bob explains. "My dad and Ann's mother dated as teenagers. Her older brother and my older sister were in the same class in high school, and we were the little kids tagging along, so we can't remember when we first met."

While in high school, Bob decided he wanted to be an engineer, and he accepted a scholarship to Bucknell University, in Lewisburg, Pa., to study electrical engineering. "I chose Bucknell because of the scholarship, and because it was close to home—about 80 miles away," he states. He graduated from high school in

Growing up: LEFT, Bob as a child; CENTER, Ann and Bob in high school; RIGHT, Bob the basketball player

1954, and started college the following fall.

At Bucknell, Bob gradually realized that not only did he want to be an engineer, but he also wanted to teach—at the university level. But his interest in engineering took a slight turn. "I got interested in nuclear engineering because of the very first Introduction to Nuclear Engineering course taught at Bucknell, taught by a chemical engineering professor out of a book by Ray Murray. That got me interested in nuclear power."

Bob won a Union Carbide scholarship for his final year of study, and Ann, who was a year behind Bob in school, had just received her associate's degree in medical secretarial science. "We decided we wanted to get married, and we figured that with my being on full scholarship and with her working, we'd be able to support ourselves. Our parents wanted us to wait until I was finished with graduate school, but we didn't want to wait, and we were confident that we could make it all work—as only the young can be. Eventually our parents agreed." They were married on September 2, 1957, at the start of Bob's senior year at Bucknell.

When it came time for graduate school, Bob chose to study nuclear engineering at Purdue University, in West Lafayette, Ind. "They had a good program, and they had good married student housing. But there's another reason why I chose Purdue," Bob recalls. "When I was in high school, the railroad sent my dad to Purdue for a one-week management training program. He came back so impressed with Purdue and its faculty that he really wanted me to go to graduate school there." An Atomic Energy Commission fellowship would pay the cost. He entered Purdue in the fall of 1958.

Like most universities at that time, Purdue did not have a separate Nuclear Engineering Department. Rather, it had an interdisciplinary nuclear engineering program. The Department was formed in 1960. "I've been told by Purdue faculty that I'm the first PhD graduate from the Nuclear Engineering Department—others graduated from the program, but I was the first PhD from the newly formed Department," Bob notes.

"My mentor at Purdue was Bob Eaton, who was an electrical engineer," Bob continues. "Because his field was electrical, and mine was electrical, he became my adviser, and subsequently he became my PhD dissertation adviser. He was a very special man."

Bob received his master's degree in the spring of 1959, but suffered a setback in his plans to continue on toward the PhD: His AEC fellowship was not renewed. "The Purdue faculty didn't understand it, I didn't understand it, and I was concerned that this was going to slow me down." But Purdue agreed to step in with financial aid, offering Bob a teaching assistantship.

Wedding day: September 2, 1957

"I was admitted to the PhD program in the fall of 1959, and became Prof. Eaton's teaching assistant," he recalls, "and right away some very special things happened. One was that he put me on a research project that he and I later published as a paper in *Nuclear Science and Engineering*. So my first publication in an ANS journal was as a result of my being his teaching assistant.

"More important by far, however, was that Prof. Eaton was the best teacher I ever had, and the best role model I could have ever had. He taught the radiation measurements laboratory, and I had taken the course from him the previous year. And the first time I went through the course with him as a teaching assistant, we sat down, and he said: 'Bob, remember last spring when you took this course? The students had a real problem with this particular concept. What can I do to explain it better?' And we sat and talked about it, and he had some ideas, and he changed the lecture, because he wanted that point more clearly understood. The next time I went through the course with him, it was the same thing. He was always changing the lecture, always trying to make it better. And this from a man who had been teaching for years!"

After another year of coursework at Purdue, however, it became obvious that Bob needed additional facilities—Purdue had no reactor—to do his PhD research. He was accepted as a research associate at Argonne National Laboratory, and began work there in the fall of 1960, working at Argonne's Thermal Source Reactor. He completed his PhD work in two years, and was granted his degree in July 1962.

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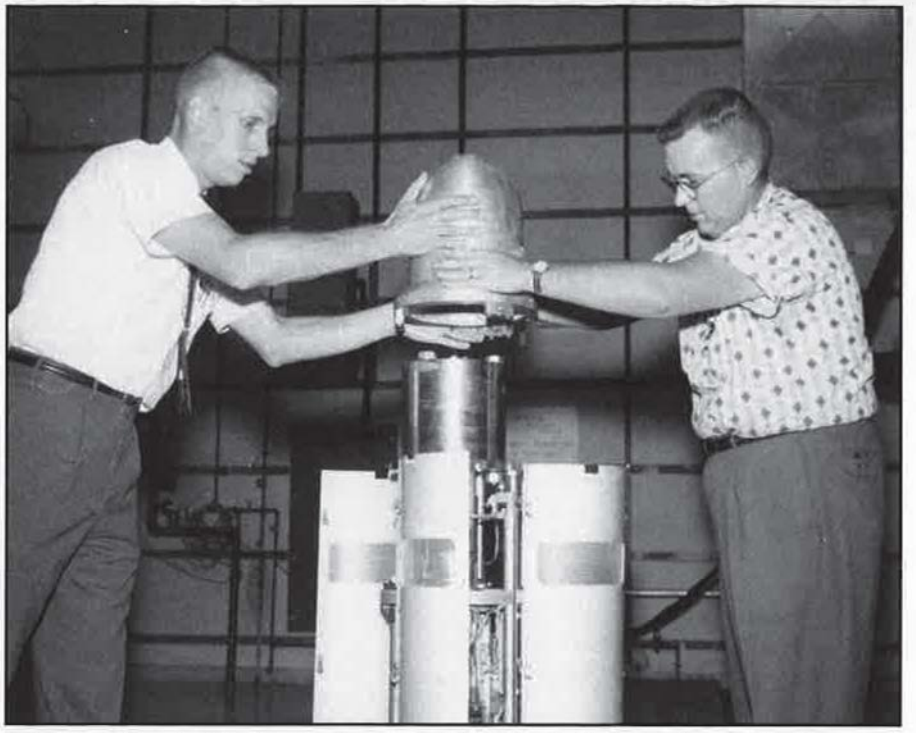

Bob (left) putting the finishing touches on the White Sands Fast Burst Reactor Facility

You're in the Army now

Bob had been a Reserve Officers Training Corps (ROTC) student as an undergraduate, and had been commissioned as a first lieutenant in the U.S. Army Ordnance Corps when he graduated from Bucknell. He had managed to delay active duty for four years while he completed his graduate work, but with his PhD now in hand, he owed the Army two years. A week after his dissertation defense, he was in the Army. (By this time, he and Ann had one child, Beth, and another on the way.)

"The Ordnance Corps sent me to ordnance officers orientation at Aberdeen Proving Ground," he says, "where for nine weeks it was like bootcamp—all the physical abuse, cleaning the latrines, scrubbing the barracks floor. There were a hundred students in the class—four of us PhDs—and we discovered that PhDs were especially qualified for latrine duty. But it turned out to be a good experience, because there wasn't anything they could do to me in terms of physical harassment that was worse than what I had gone through in my PhD defense. All the mental fatigue and stress were behind me, and I couldn't have been happier."

After orientation, Bob was assigned to the White Sands Missile Range, where the Army was planning to build a research reactor. This brought Bob and Ann to the Desert Southwest, which became their home for the next 16 years. "We immediately fell in love with New Mexico. When we were in the Midwest at Purdue and Argonne, we had really missed the mountains. When we got to White Sands, we were down at the base of the Organ Mountains, and it was just like Renovo. We loved it."

At White Sands, Bob was appointed the Reactor Specialist of the White Sands Missile Range Fast Burst Reactor Facility. For the remainder of his enlistment, he worked on the design and construction of the FBRF, becoming an expert on fast burst reactors along the way. His enlistment was up one week before the reactor was due to start up—"and they couldn't start it up on time without me," he adds—so the Army hired him as a civilian employee. "When I left work on Friday I was Lt. Long, but when I went back to work the following Monday, I was Dr. Long," he explains. He continued to live on the post, and operated the reactor for the next year. By then, he said, "I was ready to go teach."

University life

"One of the things that I had learned from my professors at Bucknell and Purdue," Bob notes, "was that to be a good engineering professor, you needed to have practiced engineering. So I had always planned to work as an engineer before I became a teacher. And after three years at White Sands—plus the two years at Argonne—I felt ready to teach." He picked up a research contract from Sandia Laboratories to work on the design of a new burst reactor, and in 1965 accepted a position in what eventually became the Chemical and Nuclear Engineering Department at the University of New Mexico in Albuquerque.

But he had hardly begun on his teaching career when the road ahead took another turn. Within a few months, he was asked by the British to take a year's assignment in England to help on the startup of a fast pulse reactor being built at the U.K. Atomic Energy Authority's Atomic Weapons Research Establishment (AWRE) in Aldermaston. "Everyone decided this would be a great opportunity for me," he says. "I wasn't tenured, but the university agreed to take me back when I returned. Sandia gave me a consulting job to supplement the salary the AEA was offering—which turned out to be about £2000 for the year, or about $5600 at that time. We deposited our furniture in three different houses, with the leftovers in the preacher's attic, and went off to England in the fall of 1966.

"The British were facing the same challenges I had faced at White Sands," Bob continues. "Their safety review committee had always dealt with a steady-state research or power reactor, and here was a reactor that's pulsed—it goes from zero power to 30 000 megawatts and back to zero in 170 microseconds, and the width of the pulse at half-maximum height is 45 microseconds. And once you start the pulse, nature has to control the size of the pulse and make sure it shuts itself down. I had had an incredible time getting the Army's Safety Review Committee to get comfortable with this, and we had an incredible time getting the British regulatory agency to feel comfortable with this as well."

In addition to working on the startup of the reactor, Bob gave several seminars at British universities. After one of these, he recalls, Otto Frisch (who, with his aunt, Lise Meitner, had first identified the nuclear fission process) came up and introduced himself. "I just wanted to hear what you young fellows were doing with burst reactors," he explained to Bob. "You know, I tickled the dragon the first time."

"We had tea together after that," Bob continues. "And from that contact, I was able to arrange for him to come over to the States and to tour and visit several laboratories. And on one occasion, during a meeting on fast burst reactors in Albuquerque, I invited him to my home for an evening. We had supper, he read to my children, and then he sat down to play the piano—sort of getting lost in the music. And I remember sitting there, thinking of how marvelous it was to have this giant of the industry in my home, playing my old upright piano."

The Longs took advantage of their year in England by visiting as many places as they could. "We lived in Reading, about 10 miles from Aldermaston and about 40 miles or so west of London. And every weekend we went somewhere—we couldn't afford to stay overnight, but we'd go on day trips with the kids. Beth was five at this point, and Jeff was three."

Bob was due back at the university in

the fall of 1967. The startup schedule for the AWRE reactor was thus driven by Bob's departure date. "We got a first full-sized pulse at around 11 on a Thursday night, and we got a second full-sized pulse on Friday, and I left for the States on Saturday morning. That reactor is still operating, as is the White Sands reactor." The Longs returned to Albuquerque expecting their third child, Mark, who was born in October 1967.

Back at UNM, Bob was finally able to devote himself to really launching his teaching career. "Through my work up to this point, I had developed the feeling that the universities needed faculty members who were interested in experimental work," he explains. "The tendency was for most of them to be theoreticians—they didn't have a lot of equipment at universities, so it was natural. But what I really wanted to teach was laboratory—reactor laboratory, radiation measurements laboratory, etc. So my challenge was getting the laboratories built up at the university. The AEC was providing grants for that purpose, but it was taking time."

While he was in England, the university had acquired an AGN-201 training reactor from the University of California, Berkeley. Bob became a licensed operator on the unit. Eventually, the university built an engineering center with a separate nuclear engineering laboratory to house the reactor. Graduate students were assigned to design and build the instrumentation for the unit. In time, the power level of the facility was upgraded from a tenth of a watt to 5 W. In addition, graduate students designed and built a cobalt-60 irradiation facility. Gradually, the university's laboratory facilities grew and expanded.

"My challenge then," Bob continues, "was how to give instructions to laboratory students. We didn't have much money, and sometimes while you were instructing one group, another would jump ahead and burn out equipment or ruin detectors. So I eventually got an AEC grant to develop instructional techniques in teaching laboratory, which involved putting instructions for each experiment on audio cassettes, with accompanying slides. We'd describe the experiment, the equipment, how it was to be connected, what the precautions were, etc., and it turned out to be a very effective technique for teaching laboratory. Lawrence Livermore Laboratory bought a set to use to teach its rad techs. And it's still being used at UNM—though it's been updated, of course, and put on videotape.

"I loved teaching laboratory, but it was somewhat of a hardship for my family," Bob continues, "because I also believed that I had to grade the lab reports myself—I did not have teaching assistants grade the lab reports. This was an important element in my teaching, and one that I learned from my professors at Bucknell. So during those years I was teaching, the family adapted to my 'watching' Sunday afternoon and Monday night football while grading lab reports."

Bob progressed rapidly through the university ranks, becoming a full professor in 1973, serving as assistant dean of engineering in 1972–74, and being appointed department chair in 1974.

As assistant dean of engineering, he began getting involved in recruiting ("I had to get rid of the crewcut and let my hair grow long—high school students just wouldn't listen to a man with a crewcut then," he notes wryly). This led somewhat naturally to involvement in other public education activities. One project stemmed from an AEC contract to develop what came to be called "Neighborhood Short Courses." "My concept," Bob explains, "was that you had to get information into the neighborhoods. So we developed some high-quality videotape programs that contained lots of demonstrations and other good stuff, and then graduate students would take these tapes into the schools and neighborhoods. That gave the graduate students experience in communicating with nontechnical audiences. We did two courses, one on Radioactivity and the Applications of Isotopes, and the other on Energy and the Environment. It took about 100 hours to do the first half-hour of tape, I think, because the studio at the university was pretty primitive, with no editing capabilities. But we got better at it.

"This led to my also doing some live television on the public television station in Albuquerque. Live television is exciting, and things often don't turn out the way you planned. But the failed experiments, and the tongue twists, somehow make you more believable. Unfortunately, the material we did soon became dated, especially since we did it in black-and-white. Today you could do it so much better because the editing capabilities are so much greater. Maybe when I retire, I'll go back and try it again."

Time outs

Toward the end of the 1960s, the nuclear industry began changing, focusing less on research and development and more on the power industry. "Our students were starting to go to work in the power industry and for utilities," Bob notes. "Up until then, most of the nuclear engineering graduates went to work for the manufacturers or the national laboratories. I began to see that if I wanted to stay in touch, I had to get away from burst reactors and weapons effects testing and the like and get back to what I had started out as, which was a power engineer."

Taking advantage of a Ford Foundation/American Society for Engineering Education Fellow Program designed to place university professors into industry for a year (with guarantees that they would return to the universities), in 1970 Bob sought work at a nuclear power plant. He accepted a one-year appointment with Consolidated Edison Company to work at the Indian Point plant, where Unit 1 was in operation and Units 2 and 3 were under construction. His specific assignment was to learn power reactor instrumentation. While there, he reported to Joe Prestele, his "mentor" at Con Ed.

"Part of the agreement of this program," Bob explains, "was that your mentor had to give you things to do other than the specific engineering job you were doing, so that you would get an idea of what it was like to manage in the company. And Prestele did a great job of that. He sent me to meetings of the safety review committee, got me involved in Unit 2 licensing hearings in Washington, and really did give me a breadth of experience well beyond what an associate engineer might get."

Shortly before Bob arrived at Indian Point, primary pipe cracking was discovered on Unit 1, and the reactor was shut down. The utility needed a quality assurance engineer on the repair and restart project, and assigned those duties to Bob. "And I said, 'I can do that,' and got to work," he states. "I became Con Ed's expert on the ASME Boiler and Pressure Vessel Code and the new B31.7 Nuclear Power Code. This was the nuclear power industry's first major repair to a primary coolant system, where you're working in high radiation fields, and was a major effort. And after that, I worked on the utility's response to the AEC's new 10CFR50 Appendix B QA standards."

When he returned to the university at the end of the year with Con Ed, Bob says, he was in the power business. "I pretty much stopped doing burst reactor research and began to look for contracts from utilities. That was an important turning point."

A few years later, in 1976, Bob was ready for a sabbatical. Joe Prestele had left Consolidated Edison and was now at the Electric Power Research Institute, and Bob applied to spend a year at EPRI with him. During that year, he focused on managing research projects. "I got a great deal out of my year at EPRI," Bob states, "since Joe already knew me, and gave me control of several projects within weeks."

But this year off was already starting to be a little different from the previous two. Bob explains: "After a few months there, I realized that I was no longer constantly thinking about what I was going to do when I got back to the university. The other times I had been gone, my attitude was that I was gathering all the information I could so that I could go back to New Mexico and teach it. But this was

no longer the case. EPRI people do a lot of traveling, and so I was on the road a lot, but when I was home, I was home—not grading lab reports, not worrying about lectures. I could go home at noon and be with Mark, who was in the fourth grade. We'd make lunch together, and then go out and play catch, or tennis, or whatever. That was a great year for Mark. And it showed me just how much of my energy I was putting into teaching and how much I was missing out on my children growing up." Thus, when the year was over, he already knew that it might be time to leave teaching for something else.

"A great learning experience"

He returned to New Mexico in the fall of 1977. Shortly after his return, he was offered a job at General Public Utilities as Manager of Generation Productivity, focusing on improving the performance of the company's fossil plants in western Pennsylvania. With the family's blessing, he accepted the position, even though it would mean leaving their beloved Southwest and moving to Parsippany, N.J. He began working for GPU in the summer of 1978.

"My intent when I went to work for GPU was to have more time with my family, more time for church work, more time to read," Bob explains. "And that worked great for the first nine months. Then the accident [at Three Mile Island-2] came, and my life has never been the same."

The accident at the utility's TMI-2 unit occurred on March 28, 1979. The next day, Bob reminded his bosses at GPU that he was a nuclear engineer, and that he had been through a small research reactor accident, and volunteered to help. They sent him home to pack his bags, and he drove to the Island the same day.

"As I was leaving for TMI, Ann asked me what I thought about it, and I answered, 'I think it will be a great learning experience,'" Bob recalls. "It took us six weeks to really get the plant stabilized and get it on natural circulation, so it was six weeks before I came home again, other than a few quick overnights—essentially to get clean clothes."

Among GPU's responses to the accident was the restructuring of the company to provide more direct management oversight of the nuclear operations. First formed—in July 1979—was the TMI Generation Group, in which Bob was made director of reliability engineering. This TMI group was the forerunner of what later became the GPU Nuclear Group and eventually GPU Nuclear Corporation. The corporation included all the nuclear people from the GPU System companies. In time, Bob became responsible for quality assurance, set up a nuclear safety assessment department, and took charge of information management and the GPU System laboratories.

With the formation of the GPU Nuclear Group, which included responsibility for Oyster Creek as well as TMI, Bob was made Director of Training and Education. Training was a primary issue in the restart of TMI-1, which had been off line for refueling at the time of the TMI-2 accident, and which remained off line until the fall of 1985.

"As a professor," Bob explains, "I was greatly influenced by a book by Robert Mager on behavioral learning objectives—the concept of performance-based training. This means you must define what a person must do in operational terms—in terms that can be measured or observed—and you design the training to achieve that and you design a test to verify it. You can't use vague terms like 'understand reactor physics' or 'know how to operate a reactor.' You have to be more specific, saying, 'I'm going to teach the operator to manipulate the controls to bring the reactor from cold shutdown to hot shutdown condition. Now what do I have to do to do that—what skills and abilities do I need?' When INPO [the Institute of Nuclear Power Operations] began to develop criteria for performance-based training, we were already well along the way with our behavioral learning objectives focus."

During the TMI-1 restart activities, Bob gradually acquired more responsibility, becoming Vice President of Nuclear Assurance in April 1982. Today he is Vice President and Director of the Corporate Services Division at GPU Nuclear. In this position, he is responsible for corporate planning, licensing and regulatory affairs, human resources, and preparing TMI-2 for monitored storage until it is decommissioned sometime in the next century.

But if you ask, Bob will admit that he misses certain aspects of teaching. "I miss the students. And I loved the challenges from my PhD candidates, all stretching and going beyond me, which they have to do. But toward the end of my time at New Mexico, I knew I wasn't taking the time to prepare the lectures that I needed. I don't think the students knew it, but I knew it. If I ever went

Bob as "Elvis Pretzel," at a GPU Nuclear variety show



The Long family today: LEFT, Beth Long Gnerich, with daughters Amy and Julie; CENTER, Mark (left) and Jeff; RIGHT, Ann and Bob

back, it would be with the understanding that I'm going to teach—no more administrative work, no more publish or perish."

Time off

Like all of us, Bob relishes his private time, though he finds himself with less and less of it these days. Family and church are most important in his list of outside interests. But he also enjoys reading, walking ("brisk" walking, we should clarify, since he strolls along at a 13-minute-mile pace, though he'll slow down if he's walking with Ann), tennis, swimming, woodworking, and music.

"Music is a big part of my life—it always has been," he notes. "My mother was a soloist and a choir director, and sang to me when I was a little boy, all the time. That's one of my favorite memories of my mother. I love to sing, and I've been a bass since I was 13, though my mother claims I was a bass in the hospital."

One of his strongest musical memories occurred shortly after the TMI-2 accident, he recalls. "I had come home for Easter. I'd actually gotten in the night before, and Ann and I were doing all my laundry and repacking because I had to return to the Island the next day. But we had time to go to the Easter service in the morning, and an Easter tradition in our church is to end the service with Handel's 'Hallelujah Chorus.' I had been sitting in the congregation with Ann, but I decided I really wanted to sing with the choir, so I left my seat and joined the basses in the back of the choir and we started to sing. But at that point I was so emotionally and physically tired from my work at the Island that somehow, as I tried to sing, I started to get choked up, and I had tears coming down my face. Since then, I can't sing the 'Chorus' without triggering all the emotion from that time. So forever more, for me, the 'Hallelujah Chorus' is associated with the TMI-2 accident, which I think is pretty funny!"

The Long children are all grown. Beth graduated from Drew University and moved back to Albuquerque. She is married, and has two daughters—the only Long grandchildren so far. Jeff graduated from Penn State and works as an architect-engineer in Dallas. He is also married. Mark, the youngest, recently graduated from the University of Rhode Island and works in the office supplies business. He lives at home.

ANS vision

Bob has been involved in ANS since his graduate school days, presenting papers and serving on committees over the years. In 1965, he joined the Trinity Local Section, and became active in its governance. But he terms William Kimel, retired Dean of Engineering at the University of Missouri–Columbia (and ANS President 1978–79) his "primary ANS mentor." "He had a special way of getting younger members involved," Bob recalls. "When I served as the Secretary of the Education [now Education and Training] Division, he was the Chair, and if there was a Board action item from the Education Division, Bill would encourage me to make the presentation. His leadership style, his sage advice, and his friendship mean a great deal to me."

Bob has also served as an ANS visitor for Accreditation Board for Engineering and Technology (ABET) accreditation of nuclear engineering programs, and served as ANS representative to the ABET Board for three years. After his move to New Jersey, he became active in the Northern New Jersey Local Section, serving as Vice Chair and Chair. And he was selected as one of the approximately 100 outstanding ANS members recognized during the ANS 25th anniversary.

To describe Bob's goals for his year as ANS president, one really has to step back a year and review the programs and projects promoted by immediate past president Jack Ohanian. "Jack and I are long-time friends," Bob says, "and it was a great pleasure and honor for me to be his president-elect. As soon as we knew this was going to happen, we began meeting together to discuss our common objectives. The society moves deliberately, and you don't make major changes in a year's time. So if the presidents and their successors don't work together toward common goals, things aren't going to change very much as the result of one effort. So I think some of the things I plan to work on are already being reflected."

Jack and Bob have both worked hard on the development of a strategic plan for the society. With that plan now in hand, the society needs to set its overall strategy and direction for the presidents to follow, Bob says. "The role of the president is to represent the society and help the society achieve the goals desired by its members."

Both presidents also point to the vast diversity of interest among the members of the society. "We have everything from biology and medicine to remote systems technology—radiation protection, human factors, mathematics, reactor safety—we go far beyond just nuclear power," Bob notes. "And during my year as president, the November meeting in San Francisco will be heavily focused on the next generation of nuclear power plants, while the June meeting in Boston is going to focus on the diverse interests of the society. I think it's appropriate that during my presidency, one meeting will be devoted to power, which is what I've devoted most of my life to, while the other is devoted to the broad applications

of nuclear energy, which is one of my key interests."

He also plans to work to increase society involvement of utility people, particularly those working at nuclear power plants. "Those utility people that are involved in a professional society are most often the headquarters staff. The plant people haven't been involved that much. But in line with the nuclear industry's efforts to increase professionalism among utility plant workers, the society is encouraging people to attend society meetings—since that's one way of becoming more professional—you exchange information with your peers. I've been working with the ANS Program Committee about trying to concentrate sessions of interest to utility people into a couple of days, rather than stretching them across the whole week of the meeting, since utility people can't leave their plants for a week at a time. Embedded topicals are one way of doing this, but I think we can do better with the regular sessions as well.

"Also, I think we need to schedule open-topic panel sessions with utility speakers. This way, the speakers would not be limited to what they wrote in summaries eight months before the meeting, but could speak on current events and interests. There's no way you can predict what is going to be a hot topic six months from now."

Another continuing concern is establishing ANS as a recognized credible source of scientific and technical information about nuclear energy and its applications. "I don't believe we should be seen as advocates for nuclear power—that's the role for the U.S. Council for Energy Awareness," Bob says. "ANS as a professional society has a responsibility to present opposite sides, opposite views to issues, to try to be as objective as we can, and to try to make that information available to legislators, decision-makers, to the Department of Energy and the Nuclear Regulatory Commission. And I'd like to see a stronger presence and recognition of ANS among the media, not through paid ads, but through getting media coverage of our scientists and engineers when they present papers at meetings, getting media coverage of the president as he travels. The Union of Concerned Scientists and Greenpeace get all kinds of media coverage, and we need to get coverage as well, because we have scientists with international reputations doing interesting work. There are some really exciting things going on, and I think the society must find ways to attract the media to hear these people and to talk with them. And that's going to be a challenge."

A challenge, yes. But Bob Long has always relished a good challenge, and you can almost hear him say, as he looks ahead to his year as ANS president, "I can do that!"—*Nancy J. Zacha* □