

nuclear news

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John Landis: manager for the nuclear age

A young World War II Naval officer, bright but inexperienced, faces a serious challenge. He has been sent to the Southampton harbor to hustle up as many tugboats as he can in preparation for a key operation in the Normandy Invasion. While most of the skippers of the American tugs assembled there display the proper patriotism, one objects, asks for triple pay for battle duty. The young officer, summoning all the sense of authority at his command, tells the merchant seaman, "Do as I say, or get off this ship," hoping to bluff his adversary. The ploy fails, however, and the skipper takes off, leaving the inexperienced officer in charge of his tug. The new "captain," who has never commanded any kind of vessel before in his life, considers what he must do. The other tugs are already under way, and he must give that critical first command, but what should it be? He watches for some clue among the crew of six on the tugboat and spotting a crewman beginning to do something that appears logical, he shouts the order to do that very thing. This proves to be enough to impress the crew, and they all fall to, performing their accustomed duties.

The crisis is not over, however. The tug, lagging somewhat after the others, strays inside a buoy marking a sandbar. As the tug begins to scrape bottom, the young officer senses defeat, but does not panic. In a flash he remembers something he had been told about tugboats and gives the order: "FULL SPEED AHEAD!" The tug easily plows through the sandbar—just as he had been told it would.

Such was John Landis's introduction to seafaring. The incident illustrates two important traits of the man, who last month became president of the American Nuclear Society. First, he accepts challenges willingly and boldly; secondly, he has a well-furnished mind and can recall a helpful bit of knowledge when it is most needed.

Today, these same qualities of lead-



An afternoon with Grandmother Barto

ership and knowledge have made John Landis, who is president of Gulf General Atomic Company, one of the most respected managers in the nuclear industry.

Family background

A descendant of a long line of Pennsylvania Dutch who had come to this country in the mid-1700s to escape religious persecution in Switzerland and Germany, Landis was born in Kutztown, Pa., on October 10, 1917, the first of five children, all boys.* His father, Edwin Charles Landis, a native of Berks County, Pa., was the son of a combination farmer and cabinet maker. Although he received little formal education and had difficulty speaking English, his "native tongue" being low German, Edwin Landis was an aggressive sort and through a cor-

respondence course in "Textile Technology" became in his teens a weaver and loom fixer. His new trade took him to Phillipsburg, N.J., where he worked long hours under great pressure. In fact, he became the victim of frequent nosebleeds and on the advice of a physician gave up that line of work to take an outdoor job. At the age of 21 he began working for the railroad and stayed in this work—mostly freight conducting—for the rest of his working career. It kept him in good health, too. Now in his late 70's, he leads an active life in retirement with Mrs. Landis at their home in Phillipsburg.

Besides being influenced by his father's aggressiveness and great curiosity, John Landis inherited his big, deep voice.

John's mother, Estella Barto Landis, possessed milder traits, being very patient, sensitive, quiet, and anxious to please. John speaks of her as having great insight. Her father, a teacher, died when she was in high school, the oldest of three children. Her mother continued to support the family by doing odd jobs in the Kutztown school system.

Hardship, then, was no stranger to John Landis's parents—nor to himself in his early life. He remembers well the years of the Depression, when his father was laid off from his job on the railroad and performed many tasks—silk weaving, helping out a local butcher, and working a garden for the owner of some property at the edge

*Besides John, who is 53 years old, the Landis brothers are: Paul, 51, director of research for Harry Diamond Laboratories, a Washington, D.C., Defense Department facility; Richard, 50, a senior engineer for Western Electric Company in Allentown, Pa.; Glenn, 48, who heads a division of Bell Telephone of Pennsylvania; and Edwin, Jr., 36, a partner in a law firm with ex-Governor Robert Meyner of New Jersey, an old friend of John. All five Landis boys went to Lafayette College.



Landis (right) as King Claudius in a Lafayette production of Hamlet

of town—to support his family. Young John helped his father in the latter two chores.

These were indeed hard times for the Landis family, and although there was always food on the table, John was not in the best of health, due to dietary deficiencies and stress. He became quite nervous and also developed a problem with his bone structure, characterized by the slow disintegration of certain joints. This occurred mostly in his knees, causing him to walk stiff-legged. The family physician recommended cod liver oil and plenty of sunshine. As it so happened, John had been invited shortly before that time to join the choir in a local Episcopal church (although he was and remains today a staunch Presbyterian); one of the benefits of being a member of the choir—in addition to the 10 cents a week “pay”—was a week’s stay at a YMCA camp in the Pocono Mountains. He went to the camp every year, each time for a longer stay, and regained his health completely. At the age of 17, he was employed as a counselor at the camp, providing him with his first “managing” experience. He continued this work throughout his college years.

Young Landis’s membership in the choir was fortuitous in another respect as well. It introduced him to a man who has deeply influenced his thinking through the years. Baritone soloist in the choir and a voice teacher, the man, Russell R. Schooley, took a liking to young John and gave him free voice lessons over a period of six years. More importantly, he imparted to Landis a sound, practical philosophy (“Well, what did you do for someone today?” was his standard greeting) and a real concern for the underprivileged.

A student of note

Landis was a dedicated high school student and graduated at the top of his class, winning a full scholarship to Lafayette College in Easton, Pa. On entering college, he took part in a pre-engineering conference, designed to assist students who thought they would like to be engineers. After taking a series of tests, John was told by a faculty adviser that he would do well in engineering but would have to find other things to supplement his engineering work because of his broad interests. His remarks were prophetic, for as time has gone by, Landis’s interests have become more and more people-oriented. His greatest pleasure in working, he says, lies in getting people into the right jobs, where they will enjoy their work and make their greatest contributions.

Landis gave evidence of his wide interests at Lafayette where, in addition to his engineering courses, he took courses in philosophy, government, dramatics, and psychology. He carried a heavy scholastic load (taking 27 hours in one particular semester) and was, with the exception of one B, a straight-A student. He also was very active in campus life, working on the student newspaper, singing with the glee club and the choir, performing in plays, and playing on the football team as a freshman and on the soccer team from sophomore year on. As a sophomore, he played first-string goalie on the team led by the great All-American Henry Eleniewski to the Middle Atlantic Conference championship. Landis himself received an honorable mention in the All-American selections for that year. He was captain of the team in his senior year.

His college career brought him in contact with a person who, like Rus-

sell Schooley, profoundly affected his thinking through life. This was L. D. (“Dud”) Rapp, now “Father Rapp,” a priest at Trinity Episcopal Church in Asbury Park, N.J. The two were inseparable through college and have maintained close ties ever since. (“We joined each other’s families” is the way Landis puts it). John credits his friend with “a greater understanding of both the emotional and the spiritual needs of humanity than any person I’ve ever met.”

Landis graduated from Lafayette in 1939, receiving a BS degree in Engineering Physics. He was class valedictorian and won many academic awards.

During his junior year at Lafayette John became more than just interested in a young lady he had known since seventh grade in Phillipsburg. Her name was Muriel Souders, a student at nearby Moravian College. During a visit to Lafayette, she happened to see John while he was studying and called to him, “I hear you’re playing Macbeth.” The budding actor acknowledged her interest and resumed his studies, but at that moment a friend of his came along and said, “Who is that girl? Get me an introduction.” The enthusiasm of his friend seemed to awaken something in Landis; instead of arranging a date for his friend, he arranged one for himself, and that is how the romance between John and Muriel began. During their senior year they went together “in earnest,” and two years later, in 1941, were married. Muriel, by the way, was also very active in campus life (“Miss Moravian” in her senior year). Majoring in English with a minor in Latin, she later taught at the Seiler School in Harrisburg (1940-41) and at Phillipsburg High School while John was overseas during World War II.

First job and Naval career

Upon graduation from Lafayette, John went to Rochester, N.Y., to work for Eastman Kodak Company. Some of his professors at Lafayette were disappointed that he could not at that time accept one of the graduate fellowships he was offered, but at a conference of the Landis family it was determined that this would have to be foregone in order to see to it that all the younger brothers were able to go to college.

Landis was hired by Kodak as a management trainee but because of his engineering and science background was first assigned to the research laboratory, where he assisted in the development of sensitometric

test processes and equipment for new color films and where he later supervised the testing of photosensitive emulsions.

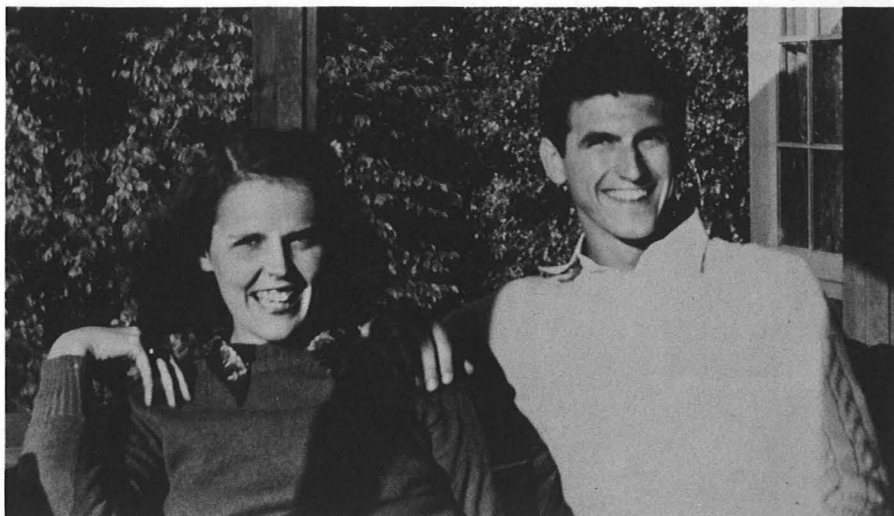
His career at Kodak was cut short when he drew number seven in the draft (Eastman had a policy of asking for no deferments, by the way), and so Landis scouted up a commission as a Naval officer and entered the service in early 1943. He served for three and a half years as an ordnance officer, with assignments in influence mines countermeasures, the building of artificial harbors for the Normandy Invasion, aircraft fire control, and guided missiles.

His most memorable, if most harrowing, experience in the Navy was, clearly, the part he played in the events surrounding D-Day. Among other things, he was responsible for seeing that everything was in readiness to transport and emplace huge concrete caissons, called "phoenixes," as part of the over-all artificial harbor building operation, called "Operation Mulberry," that was a key to the invasion plan. The phoenixes, some of which were about 200 feet long, 50 feet wide, and 60 feet deep and weighed 6,000 tons, were made to float by pumping the water out of their compartments and, conversely, were lowered into position on the seabed by opening valves and letting the water in. Handling the phoenixes required a large fleet of harbor tugs, ducks, and service boats.

The operation was a success, requiring of Landis several trips back and forth across the English Channel during the invasion. It was during this operation that Landis assumed command of that tugboat mentioned earlier, and he learned to handle it gingerly. The Mulberry harbor at Omaha Beach served its purpose, allowing the delivery of vast amounts of supplies and materiel between D-Day plus 7 and D-Day plus 13. A violent storm then struck, however, and in three days reduced the artificial harbor and many of the craft assembled there to rubble. Landis says that ships, light craft and the pier wreckage were piled up for five miles along the beach at the end of the storm ("The worst devastation I have ever seen," he says, "except for the bombed-out cities of France"). He was assigned, by the way, to take part in the cleaning-up operation under Admiral Ellsberg.

Introduction to nuclear

Primarily, however, Landis's Naval career is most significant in that it in-



John and Muriel: collegiate sweethearts

roduced him to certain key people and also to the study of nuclear physics. He met Jim Wardrop early in his Naval career when they both attended mine warfare school in Yorktown, Va. They became fast friends and went overseas together. After Normandy, Landis returned to the States and was assigned to work in aircraft fire control under R. B. Forward and guided missiles under L. R. Hafstad, who later became the first director of reactor development for the AEC. Landis rejoined Wardrop in the latter assignment. Both took a nuclear physics course under Hafstad during which they became extremely interested in nuclear power.

Upon leaving the Navy, Landis went back to Eastman Kodak, but only for one day. His involvement in the nuclear field had taken hold of him, and nothing else would satisfy him from that point on. He decided to go to Princeton University to get the proper training in nuclear fundamentals. At the same time he was retained by the Navy as a consultant between August 1946 and September 1950. He worked and studied at the University for two years and then moved over to the Educational Testing Service, where he supervised the preparation of examinations in science and engineering for college, professional, and graduate-school programs.

During the years in Princeton the Landises grew not only in knowledge and experience, but also in numbers. Two daughters were born: Maureen in 1947 and Marcia two years later. It was a busy time for John Landis, what with establishing a family, carrying on nuclear research, working as a teaching assistant, studying, and serving as a consultant with travel back and forth from Princeton to Washing-

ton. He ran himself down, in fact, and ended up flat on his back with a serious illness akin to polio.

It was time for a change, and in 1950 the opportunity came. Landis was contacted by his old friend Jim Wardrop, then with the AEC in the Stationary Reactors Branch. He called to say that Hafstad and another Navy friend, H. M. Mott-Smith, wanted John to come with the AEC. Landis accepted, and after several months of being cleared by the government for security purposes, went to work in Washington.

During the three years that he worked for the AEC, Landis coordinated several basic technology programs and administered several reactor development contracts. Between 1951 and 1953 he was involved in the Industrial Participation Program with J. K. Pickard. In this work he traveled a great deal and, of course, was thrown together constantly with people from industry. It was inevitable that the talented young administrator should be the target of many job offers.

Industry calls

In mid-1953 Landis was offered employment by The Babcock & Wilcox Company. He took the job, becoming the first outside nuclear man hired by the company. The association was a good one on both sides. Landis was in a position where he was depended upon for his ability in nuclear matters, contract administration, and dealing with the AEC. For its part, B&W made great strides in developing its nuclear business during the "Landis period." He progressed in his status with the company's Atomic Energy Division from director of customer relations to assistant manager of the Division, next manager of the Lynchburg (Va.) op-



En route to Omaha Beach: a "phoenix" (topped with an anti-aircraft gun) in tow

erations, and then manager of the Atomic Energy Division. From 1957 to 1965 Landis ran the operations at Lynchburg.

He took part in a number of exciting B&W projects: the NS *Savannah*, the Liquid Metal Fuel Reactor Experiment, Indian Point No. 1, the Engineering Test Reactor (ETR), among others. He was instrumental in getting B&W into the fuel fabrication business, including fuel for the Navy and the first core for the Materials Test Reactor (MTR).

In 1965 Landis was shifted to Washington, D.C., where he served as general manager of Washington Operations for B&W. He stayed in this capacity for three years, but was dissatisfied with the post, since he was removed from nuclear power management, where he thought he could do the most good.

For this reason—and because of his great admiration for Fred de Hoffmann—Landis was receptive to an offer made early in 1968 by Gulf General Atomic Company of San Diego, Calif., a subsidiary of the Gulf Oil Corporation. He joined the company in June 1968 as regional vice president working out of Washington, D.C. In July 1969 he became group vice president for engineering and manufacturing, and a year ago, in July 1970, two years after he joined the company, he was elected president.

He has been very happy with his decision to join Gulf since he believes that the company is ideally suited, in

terms of resources and long-term attitude as an energy company, to make significant progress in the nuclear field.

When he is not traveling—and he is constantly on the move between San Diego, Washington, Fort St. Vrain, and elsewhere these days—Landis is usually in conference with his GGA associates at San Diego. His office is essentially a conference room, his desk placed at the end of a 10-foot table. The desk is bare, except for a pen set (he keeps his telephone behind him on a stand so as not to let a telephone conversation interfere with an ongoing conference). The whole arrangement is geared to communication, and this, of course, is one of John Landis's strong points. He is noted for his ability to make another person's problems his own and to actively seek solutions to those problems.

At home with the Landises

The Landises live in La Jolla Farms just minutes from the GGA complex. Their spacious California ranch home is surrounded by a wide variety of plant life, subtropical and otherwise. Both John and Muriel enjoy working outside, John at landscaping and Muriel at gardening. They have much to work with: orange, lemon, avocado, and palm trees, myoporum, callistemon (bottlebrush), wild strawberries, fuchsia, pineapple guava, birds-of-paradise, and more. In the evening John likes to walk his two collies down the hill from his home to the beach. His

hobbies include photography, hiking, and book-collecting. Muriel extends her interest in gardening to floral arrangements and enjoys working in certain handicrafts, with special competence in decoupage.

The Landis daughters are both away from home now. Maureen is married (Mrs. Thomas J. Biggart) and teaches psychology at the University of Maryland in Okinawa. Her husband is in the U.S. Air Force, stationed on the island. Marcia is about to receive her MS in "Human Movement" (a combination of physical education and physical therapy) at the University of Massachusetts.

Landis, in being elected president of the American Nuclear Society, takes that office after holding several positions of responsibility and importance in the Society. He was one of its founders, and in 1966 was elected Fellow "... for his early recognition and clear understanding of the potential of nuclear power, his initiation and direction of pioneering power reactor projects, and his continuing contributions to a wide range of peaceful uses of atomic energy."

He has been active in the Atomic Industrial Forum ever since it was formed and now serves as chairman of its International Affairs Committee.

He is known for his efforts to establish uniform standards in the nuclear industry. He is a member of the board of directors of the American National Standards Institute, and from 1967 through 1970 was chairman of the organization's Nuclear Technical Advisory Board.

Landis has served on six AEC advisory committees and several committees for the states of New York and Virginia.

In 1960 he received an honorary D.Sc. from Lafayette for his contributions to the development of nuclear power. He has written more than 70 papers on the peaceful applications of atomic energy, has given hundreds of talks, and has served on the boards of many educational, charitable, and civic organizations, including Lafayette College, Virginia Polytechnic Institute, and Randolph-Macon Woman's College.

In his role as president of ANS, Landis hopes to promote still further the Society's work in standards development and to emphasize the need on the part of all members to use their knowledge and talents to explain the facts about nuclear power to the public and to help solve the energy-environment crisis facing the nation.

—C.F.