

## ***THE FIRST AND HIGHLY SUCCESSFUL DECADE OF NUCLEAR POWER WORK AT NNS***

***Thanks to Vital Contributions Made by Numerous Apprentice Alumni***

~ Introduction ~

The following illustrations and text were presented to the attendees of the Apprentice Alumni Association's annual banquet on March 27, 2009, honoring the Class of 1959. This article provides the same information for the benefit of alumni unable to attend that event.

Bill Lee, a member of that class, and a frequent contributor to the Memories Page of the Association's web site, created and delivered the presentation.



Newport News Shipbuilding, as it then informally called, first became involved in the Navy's nuclear propulsion program in 1952. The next ten years were filled with rapid-fire accomplishments. By 1961, which was the shipyard's 75<sup>th</sup> anniversary year, the A1W prototype in Idaho, the carrier ENTERPRISE, and the submarines ROBERT E. LEE AND SHARK had all been completed.

In addition, six nuclear-powered, ballistic missile submarines were under construction at the end of 1961.

It all began during the summer of 1952 when NNS President J. B. Woodward, Jr. became interested in nuclear work possibilities for the yard. His first act was to pursue an opportunity to send a few shipyard engineers to Oak Ridge to study nuclear physics for a year under the auspices of the Atomic Energy Commission and Naval Reactors.



Intensive interviews for this purpose were arranged to be conducted by a then-obscure navy captain...

...Hyman G. Rickover.

Apparently, President Woodward wanted to impress Rickover with the shipyard's capabilities, so he arranged for the interviews to be conducted in a pretty unusual venue...onboard the SS UNITED STATES, during her builder's trials!



Rickover selected six of the yard's best and brightest young engineers to go to Oak Ridge for a year. This group is often lightly referred to as the Shipyard's 'Original Oak Ridge Boys'. One of the engineers selected was also an apprentice graduate.



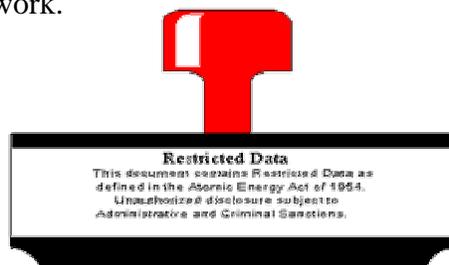
**Dick Broad**, Class of 1942, later became the Company's vocal and often volatile Vice President of Nuclear Operations.

In 1953, additional engineers were selected to go to Oak Ridge. Included in that group were apprentice alumni **Ty Bowman**, Class of 1950; and **George Morse**, Class of 1947.



Years later, they would be amongst the six of nine senior managers of the highly successful NIMITZ propulsion plant design team who were also graduate apprentices.

Relatively little has been written about the fast-paced days of nuclear power activities at Newport News Shipbuilding between 1952 and 1961. In part because of the secrecy that shrouded the participants' work.

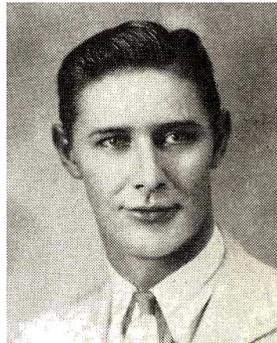
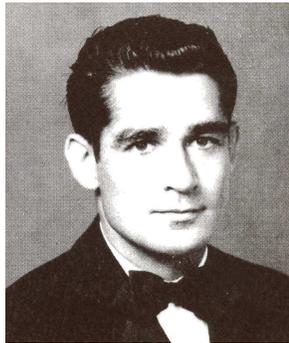


But there also was another very good reason:

***THEY WERE TOO BUSY MAKING HISTORY TO RECORD IT!***

Nevertheless, their many accomplishments deserve to be remembered and appreciated by all apprentice alumni. After all, their work was the very basis of what followed for decades, and for all of the ongoing nuclear work activities at the shipyard.

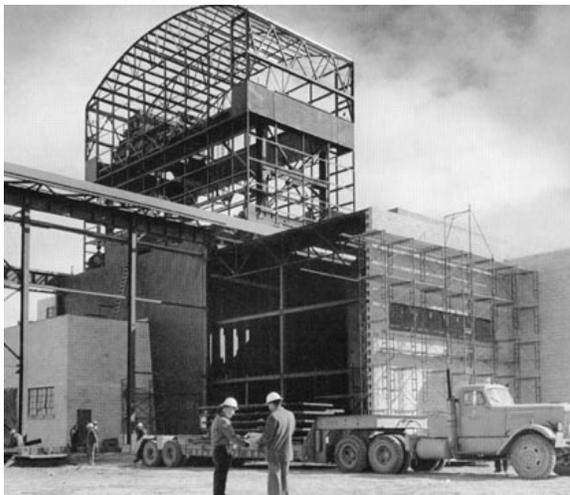
In early 1956, a number of apprentice graduates moved to Idaho to build the so-called Ship in the Desert. Those pioneers include **Ernie McDermon**, Class of 1947; **Alec Price**, Class of 1944; and **Jack Watson**, Class of 1944. A dozen more waterfront and design support apprentice alumni served under their capable leadership.



**Happily, the shipbuilders who built the A1W Prototype were represented at the 2009 Apprentice Alumni Association's banquet by:**

**Lonnie Jennings, Class of 1952; and Gene Corson and Pete Squires, Class of 1953.**

**They and their associates were the spark that ignited the careers of hundreds of Alumni who have contributed to the many nuclear successes of NNS...and still do.**



Just 47 months after the contract for the A1W Prototype was signed, they had completed the project. The cost of this first-of-a-kind nuclear facility was only \$26 million.

In parallel, and through necessity, the Atomic Power Design Department, the Atomic Power Division, the Quality Control Department, the Radiological Control Department and the Shift Test Engineer Program were all created in that very busy time period.

When the shipbuilders returned to Newport News from Idaho, they applied their new-found, nuclear-related skills to the construction of the world's first nuclear-power aircraft carrier; the USS ENTERPRISE.

Designers who had worked on A1W had already turned their attention to NNS Hull 546.

Many of the APD design team leaders were also graduate apprentices. They included **Harold Johnson**, Class of 1914; **Kelvin Geggie**, Class of 1931; **Ray Nelson**, Class of 1941; **Gordon Poole**, Class of 1924; and **Rogers Lamison**, Class of 1944.



Initially, engineers and draftsmen were crowded together in two large open areas on the top floor of the main office building's original section; built in 1890.



It only took the shipyard four years and ten days, from contract signing to ship delivery, to design and build ENTERPRISE. On her initial sea trial, this state-of-the-art carrier performed almost perfectly, so no further trials were required.

In parallel, in those first ten years, other teams of NNS designers and craftsmen became 'boat' builders.

Of course, the 'boats' they built were nuclear-powered attack and ballistic missile submarines. For years, dozens of these sophisticated vessels were constructed on the yard's venerable sliding ways. Nevertheless, the first SSBN was built in an amazingly short period of time – only 25 months!



The Apprentice School's Class of 1959 members served their apprenticeships right in the middle of that historic period of time. In the spring of 1956, six members of the Class of '59 were simultaneously offered design apprenticeships in APD.

Between 1957 and 1961, twenty-four apprentices completed their time as 'Atomic' Designers (EDA). One-third of that number were members of the Class of '59. Incidentally, and appropriately, certificates issued to all members of that class included an image of the SS UNITED STATES.

By 1976, when the EDA discipline was consolidated with several others, sixty men and women had received Designer: Atomic certificates.



~ Postscript ~

Near the end of this abbreviated history lesson, I apologized to the banquet audience for perhaps overly highlighting the APD design members in the Class of 1959. My excuse was that these were my people—and that March 27, 2009 was our night.



Just as it had been for the entire class a half-century ago in the gym of the old Athletic Building.

I ended by reciting a few lines of verse...lines that I felt most Apprentice Alumni in the audience would also find personally appropriate.

*Bill Lee*  
March, 2009

***I LIKE TO TELL YOUNG ALUMNI  
OF THE WAY IT USED TO BE  
IN THE SHIPYARD THAT WAS  
THE SHIPYARD THAT MADE ME...ME***

