

CHRISTENING OF
USS JEFFERSON CITY
SSN759

NEWPORT NEWS SHIPBUILDING
MARCH 24, 1990



Welcome to the Christening of USS JEFFERSON CITY

Welcome to the christening of the submarine *Jefferson City* (SSN759). This submarine represents the latest in weapons systems and undersea technology. It is a far cry from 90 years ago – April 11, 1900 – when the Navy purchased its first submarine, *Holland* (SS1).

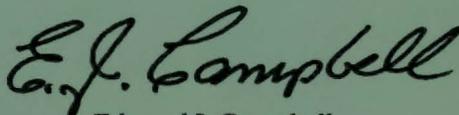
Those early submersibles were certainly crude by today's standards. John P. Holland's submarine was 53 feet long, had a crew of seven and could dive to a depth of 100 feet. I shake my head in wonderment when I see pictures of Holland's boat and of the submarines we built here for Simon Lake shortly after the turn of the century.

By comparison, *Jefferson City* and the other submarines in the *Los Angeles* class are 362 feet long, 33 feet in diameter, and carry a crew of 13 officers and 120 enlisted men.

As you would imagine, submarine construction methods have changed drastically over the past 90 years. Today Newport News uses tools and technology never envisioned by Holland or Lake.

The submarine's mission has changed, too. In those early days, submarines were used primarily to defend coastal and harbor areas. Today they run submerged for months at a time, from tropical climates to the frigid waters of the Polar ice cap, to protect our freedom.

There is one thing that has not changed over the years. Dedication. From the craftsmen who build the submarines to the sailors who operate them, there is still no substitute for excellence. We celebrate the commitment and high standards of shipbuilders and sailors alike as we christen SSN759, *Jefferson City* – a symbol of excellence for years to come. And we send a special note of congratulations to the U.S. Navy Submarine Service on its 90th anniversary.



Edward J. Campbell
President and Chief Executive Officer
Newport News Shipbuilding

The City of Jefferson: *A Capital Idea*

Nestled along the banks of the winding Missouri River is the City of Jefferson, the official name of Missouri's state capital.

Nearly equidistant between St. Louis and Kansas City, Jefferson City was carved out of virgin timberland donated by the federal government to establish a state capital in the early 1820s.

Named after the Nation's third president, Thomas Jefferson, the city was planned and laid out by Daniel M. Boone, son of the famous pioneer, and Major Elias Bancroft. Lots went on sale in 1823, and many of the early families to settle were friends and associates of Jefferson, and came from Charlottesville, Va.

The town was incorporated in 1825, and its first mayor, Thomas Lawson Price, a young Virginian, was elected in 1839.

The first Capitol Building was completed in 1826, and housed the state's executive, legislative and judicial functions. The second floor served as the governor's living quarters until the first Executive Mansion was built in 1834. In 1837 the Capitol burned and was replaced by a building on the site of the current Capitol.

While the early Jefferson City settlers came primarily from Virginia, Tennessee and Kentucky, a number of German emigrants settled there after 1840. The German influence is seen today in the architecture and use of brick trim and stone houses, and for years the community was called the "Town of Brick."

The Civil War had an impact on Jefferson City. Missouri was the most northern state with pre-dominant southern sympathies. While the State Convention chose for Missouri to remain in the Union, Governor Claiborne Jackson favored secession, and he called for 60,000 volunteers to form a state militia to enforce his plans.



Jackson led the volunteers to Boonville, Mo., where Confederate troops were being formed. In the meantime, Union soldiers took possession of Jefferson City, and camped right on the Capitol grounds.

A Confederate force of 20,000 soldiers and heavy artillery entered Missouri from Arkansas to capture Jefferson City. The troops camped along a nearby ridge for three days while residents hastily built fortifications and prepared for a battle. But on Oct. 7, 1864, General Sterling Price suddenly and without explanation withdrew his Confederate soldiers and moved them west and away from the city. The city had been spared from open conflict.

Recovery from the Civil War was slow in Jefferson City. However, thanks to Governor B. Gratz Brown, elected in 1870, the city saw a building boom. Not only did he erect a series of two-story flats on what was Main Street, he had built a French-Italian mansard roofed building which now serves as the Governor's Residence. The mansion is one of the

Thomas Hart Benton's famous mural depicting Missouri's history is painted on a wall in the Capitol Building in Jefferson City.

The beautiful Governor's Residence, completed in 1871, was once the scene of elaborate social events.

Missouri's Capitol Building was dedicated in 1924, and was preceded by two other Capitols which burned down.

The circus visits Jefferson City, circa 1890.

The now-restored Lohman Building acted as a combination store, inn and warehouse, serving Missouri River travelers in 1850-70.

Harry S. Truman State Office Building, one of the most attractive buildings of its kind.

The 106-year-old St. Peter's Roman Catholic Church reflects classic architecture.

best examples of this type of architecture in the country, and it provided a scene for elaborate social events during his stay in office.

The Capitol also saw growth after the Civil War with the addition of two new wings, a new dome, fire-proof vaults, a new heating system and expanded rooms.

But fire struck again in 1911. A lightning bolt hit the Capitol dome, causing a blaze that could be seen for 20 miles and raged for a day and a half. A blackened hulk was all that remained.

The state offices moved into temporary quarters, and four years later the cornerstone for Jefferson City's third and current State Capitol Building was laid. The state offices moved into the \$4.5 million building in 1917, and after much of the exterior and interior artwork was completed, the Capitol was dedicated in 1924.

From its beginning, the focus of Jefferson City has been on state government. That is true today as the Capitol Building dominates the city's skyline, and the largest employer in Jefferson City is the state government, which has approximately

14,000 employees in the city. A state penitentiary which was started in Jefferson City in 1833 now encompasses four detention facilities there with more than 4,500 inmates.

Private industry has also found that Jefferson City is a fine community in which to work. Westinghouse Electric manufactures underground transformers, and Chesebrough - Pond's produces cosmetics. Maytag Company makes wire harnesses and powdered metal parts, and Johnson Controls manufactures foam seats for cars. Scholastic magazine is distributed through its center in Jefferson City.

With a population of more than 37,000, Jefferson City is a clean, well planned community. It has 1,200 acres of parks within its city limits, plus two public swimming pools, a public golf course and two private country clubs, an amphithea-



ter that seats 1,500, 11 public tennis courts, 11 lighted softball fields and a large YMCA. The average price of a new home ranges from \$45,000 to \$75,000, with more spacious and elegant residences running \$150,000 or more.

Jefferson City has two high, two junior high and 15 elementary schools with a total enrollment of more than 10,000 students. Lincoln University, which was started in 1866 as a black college called Lincoln Institute, currently has an enrollment of about 2,900 students, more than 60 percent of whom are white. Nichols Career Center is a vocational/technical school with an enrollment of nearly 2,500.

There are four hospitals in the city, plus 96 doctors, 390 nurses and 34 dentists.

Cultural opportunities are provided by the Jefferson City Symphony Orchestra, Elizabeth Rozier Gallery, Jefferson City Art Club, Cole County Historical Society, Capital City Council on the Arts, Morning Music Club, Community Concert Association, Little Theatre, Jefferson City Working Artists League and programs at Lincoln University.

Jefferson City, located in the heartland of America, has stood the test of time. Over the years, it has demonstrated its strength and resourcefulness – a proud legacy for the first Navy ship to bear its name.

A 13-foot tall statue of Thomas Jefferson, the city's namesake, looks out over the Capitol grounds.





Mrs. Ike Skelton, *Sponsor*



Elena C. Skelton
Matron of Honor



Carolyn R. Skelton
Maid of Honor

The Christening Party

Mrs. Ike Skelton, wife of Congressman Ike Skelton, is a native Missourian, and is a graduate of the University of Missouri, Columbia.

Mrs. Skelton served as president of the 95th Congress Club, the organization representing spouses of new members of Congress. During the 100th Congress she served a two-year term as president of The Congressional Club.

Mrs. Skelton is a member of the First Christian Church of Lexington, Mo., and is active in International Club III and Congressional Families for Drug-Free Youth. Her other memberships include Delta Delta social sorority, PEO Sisterhood, Daughters of the American Revolution, Daughters of the American Colonists and United Daughters of the Confederacy.

Congressman and Mrs. Skelton have three sons: Ike V and James, both of whom are serving on active military duty, and Page; a college senior.

Elena C. Skelton, wife of Lt (jg) Ike Skelton V, USN, earned a bachelor's degree in business administration from Mount Vernon Women's College in Washington, D.C. She most recently worked as a graduate assistant at Central Missouri State University Warrensburg, Mo., while working towards her master's degree in accounting. Prior to that she was director of business services at Central Texas College's branch campus in Panama City, Panama.

Fourteen-year-old Carolyn R. Skelton, niece of Congressman and Mrs. Skelton, lives in Warrensburg, Mo., with her parents, James P. and Wanda H. Skelton and her younger brother, Paul. "Cary" is active in softball, tennis, basketball, volleyball and track. She lettered in track in the seventh grade, and was also a member of the student council.

Admiral Kinnaird R. McKee, USN retired from the U.S. Navy in November 1988 after six years as the director of Navy Nuclear Propulsion. In that position he controlled all aspects of nuclear propulsion in the Department of the Navy and in the Department of Energy. He is currently on the board of directors of the Philadelphia Electric Company, on the board of advisors of the U.S. Naval Postgraduate School and The Center for Security Policy and on the board of governors of the Chesapeake Bay Maritime Museum.

Prior to his assignment with Navy Nuclear Propulsion, McKee was the director of Naval Warfare (1979-81), commander of the U.S. Third Fleet (1978-79), superintendent of the U.S. Naval Academy (1975-78), commander of Submarine Forces Mediterranean (1973-75), executive director of the CNO Executive Panel (1970-73).

From 1969 to 1970 he was special assistant to the director of the Navy Program Planning, commanding officer of *USS Dace* (SSN607) from 1966-69 and assistant for officer selection, training and education in the Division of Naval Reactors with the U.S. Atomic Energy Commission (1964-66).

McKee served as executive officer on *Nautilus* (SSN571) and *Sam Houston* (SSBN609) and served on *Skipjack* (SSN585) and three diesel submarines. He also commanded a small experimental submarine and during the Korean War served on a destroyer.

McKee graduated from the Naval Academy in 1951, was selected for Rear Admiral in 1972 and promoted to Admiral in 1982. His decorations include two awards of the Distinguished Service Medal, five awards of the Legion of Merit and three Navy Unit Commendations.



Admiral Kinnaird R. McKee, USN (Ret)
Principal Speaker



Edward J. Campbell
*President and Chief Executive Officer
Newport News Shipbuilding*



Dr. Lewis A. McPherran
*Pastor, First Christian Church
Hampton, Va.*



Herbert H. Bateman
*U.S. House of Representatives
1st Congressional District, Va.*



Louise Gardner
Mayor, Jefferson City



Ike Skelton
*U.S. House of Representatives
4th Congressional District, Mo.*



VADM Daniel L. Cooper, USN
Assistant Chief of Naval Operations, Undersea Warfare

PROGRAM

Welcome

Edward J. Campbell
President and Chief Executive Officer
Newport News Shipbuilding

National Anthem

United States Navy Band

Invocation

Dr. Lewis A. McPherran
Pastor, First Christian Church
Hampton, Virginia

Introduction of Distinguished Guests and Remarks

Mr. Campbell

Remarks

The Honorable Herbert H. Bateman
U.S. House of Representatives
1st Congressional District, Virginia

Remarks

The Honorable Louise Gardner
Mayor, Jefferson City

Remarks

The Honorable Ike Skelton
U.S. House of Representatives
4th Congressional District, Missouri

Remarks and Introduction of Principal Speaker

Vice Admiral Daniel L. Cooper, USN
Assistant Chief of Naval Operations,
Undersea Warfare

Principal Address

Admiral Kinnaird R. McKee, USN (Ret)

Introduction of the Sponsor, Matron of Honor, and Maid of Honor

Mr. Campbell

Christening of *Jefferson City* (SSN759)

Mrs. Ike Skelton, *Sponsor*
Mrs. Elena C. Skelton, *Matron of Honor*
Miss Carolyn R. Skelton, *Maid of Honor*

Special Program

Closing Remarks and Presentation of Christening Bottle

Mr. Campbell



The Jefferson Spirit at Newport News

The City of Jefferson is named after Thomas Jefferson: inventor, architect and leader, and a man known for his pursuit of new thoughts and methods. That same spirit is embraced today by Newport News Shipbuilding and its employees.

Computers have had a sizable impact on the Shipyard, and they have dramatically altered the way we build ships.

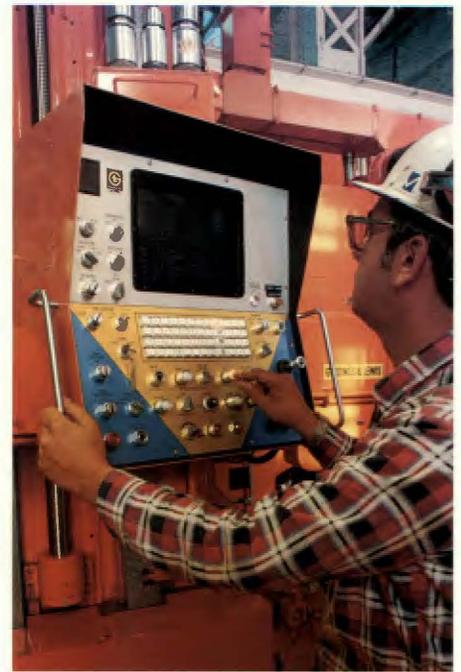
Far beyond Jefferson's wildest expectations, today's engineers at Newport News design ships and ship systems using our VIVID[®] computer-aided, 3-D solids modeling system. Engineers are able to create colorful three-dimensional systems right on the computer screen and determine where and how those systems fit into the overall ship's plan. The computer notifies the engineer right on the screen where any interference of systems would occur so corrections can be made to prevent such faults.

CADAM – Computer Aided Design and Manufacturing – is a way of life at NNS. Not too many years ago designers hand-drew schematics of shipboard systems at drafting tables and used slide rules to make their calculations. Now they can produce the two and three-dimensional drawings on a computer terminal, making them more accurate, more complete and in a fraction of the time.

The information from CADAM drives machine tools and metal fabricating machines through numerical control tapes or information transmitted directly from the computers. The end result is consistent, higher quality parts and greater productivity.

Computers also play an important role in the cutting of steel plates. Using special software packages, the Shipyard is able to accurately lay out patterns that make maximum use of the plate area and help reduce scrap during the cutting process.

Since the building of today's

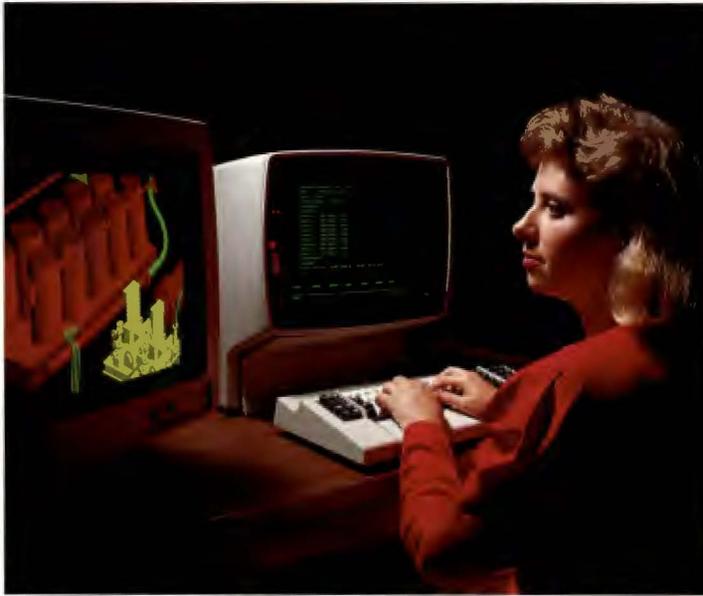


ships is an extremely complex task and involves literally millions of parts, Newport News has developed a single computer data base system that provides information and status reports on ship parts and material in the Yard. It tracks a part from the initial engineering specifications, to the purchasing agent, to the supplier, to the inspection at the NNS receiving dock, to the warehouse, to the shop and finally to the installation and testing aboard a ship.

Called "Argos," the computer system is also valuable in the planning of work as it flows through the various areas of the Shipyard, and it helps develop work packages which

Newport News' AOD allows the Foundry to pour high quality metals.

Numerical control tapes and information transmitted directly from computers drive machine tools and metal fabricating machines.



specify the various work phases to be performed on the parts. A bar coding system will also provide Argos with rapid information on part status and location.

Much of this rapid transfer of data between computers within the company is accomplished through the Shipyard's fiber optic telecommunications network. Here state-of-the-art fiber optic technology allows for the high speed exchange of data between computers in waterfront and engineering activities.

Newport News has one of the most highly-automated pipe bending facilities in the country with its two computerized pipe bending machines. The time it takes to bend pipe – up to 14 inches in diameter – has been dramatically reduced from hours to minutes. And the pipe is bent to designated specifications consistently, time after time.

The Shipyard has harnessed the power of the laser beam to slice through metal with unprecedented speed and accuracy. Two laser cutting machines run 16 hours a day cutting sheet metal for ship cabinets, lockers and venting systems. The lasers make clean, smooth cuts that do not require secondary operations like grinding or polishing. Aluminum, stainless steel, galvanized steel, mild steel and copper are also cut by the machines.



Three-dimensional computer modeling helps NNS engineers accurately determine the placement of systems in ships.

Computer-controlled cutting machines can accurately burn through plates of steel up to eight inches thick.

Pipe up to 14 inches in diameter can be bent on this numerically controlled pipe bending machine.



Newport News Shipbuilding was one of the first companies in the shipbuilding industry to use waterjet technology. A high pressure stream of water and garnet grit was used to cut steel plates during the deactivation of two submarines. Use of the waterjet technology required little surface preparation, and there was no risk of fire during the cutting operation.

Robotics, once a feature in sci-fi movies, has become a part of the Shipyard's operations. In the Steel Production Facility, a robotic welder is used for jobs that involve a series of identical weldments. Use of the robot has resulted in a 50 percent reduction in the time spent on welding those items by hand and with semi-automatic equipment.

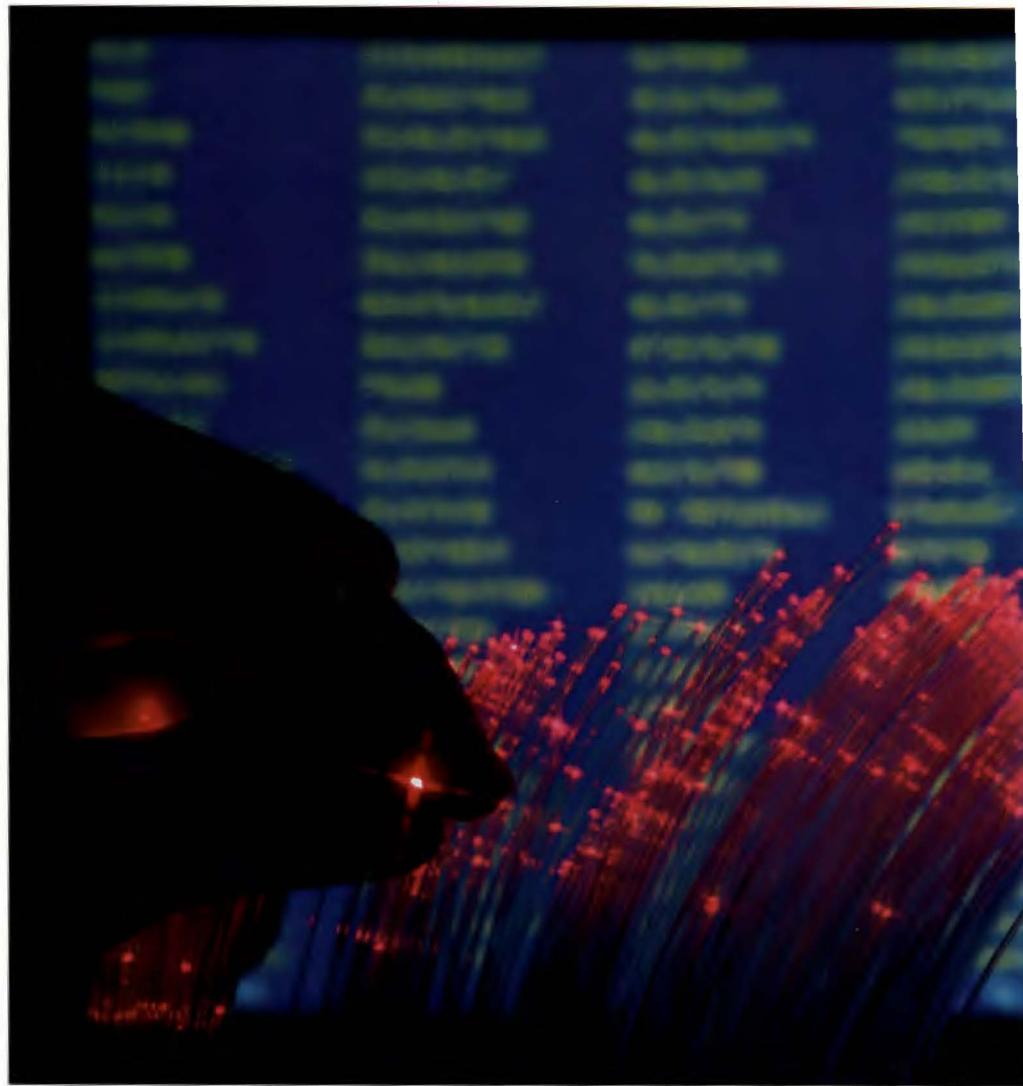
Some 300,000 ship pipe hangers were produced last year, thanks to robotic technology at Asheville Industries, the Shipyard's subsidiary in Asheville, N.C. Robotics has replaced an operation that was previously labor - intensive and highly repetitive.

As ships become more sophisticated, so do their metals. That is why Newport News' foundry operations uses an Argon Oxygen Decarburization (AOD) unit to produce the high quality metals required for castings in today's submarines, and the submarines of the future.

In Thomas Jefferson's day, boatbuilding started from the keel up. Today, modular construction at Newport News has changed all of that.

Giant hull rings - 33 feet in diameter - are joined together in the Ring Module Shop and fitted with machinery foundations, stiffeners, tanks and decks to form modules. After blasting and painting, the modules are moved to the Module Outfitting Facility where they are preoutfitted with machinery, piping, wiring, insulation, cabinets, lockers and many other items before being joined together to form the ship's hull.

The hull is moved onto outboard ways for additional outfitting and testing. Later the submarine is rolled onto a 640-foot floating dry dock for launching into the James



River. Then the ship undergoes additional systems testing, including sea trials, which are comparable to automobile test track trials. Finally, the submarine is delivered to the Navy and commissioned.

Newport News Shipbuilding operates in the spirit of Thomas Jefferson, always searching for new and better ways to accomplish its tasks and always with an eye on the future.

Newport News Shipbuilding's fiber optic telecommunications network allows for the high speed exchange of data between computers.

The Submariner: *Being the Best*

A *Los Angeles* - class submarine like *Jefferson City* is one of the most complex and sophisticated mobile systems ever built.

It takes teamwork among the Newport News shipbuilders to design and construct this intricate vessel. And it takes that same kind of concentrated teamwork to operate it.

Just ask Commander Russell Harris. He's served aboard five submarines, and he is now the Prospective Commanding Officer for *Jefferson City*.

"Teamwork aboard a submarine is absolutely critical," he says. "Submarines contain sophisticated equipment and complex systems. Nearly every major component or system affects the overall operation of the ship. Therefore, every crewman must consistently perform well in close coordination and cooperation with his shipmates.

"That's why submariners have to be the cream of the crop, and they are trained to focus on the task at hand. They know they are the best, and they spend every day trying to live up to that reputation.

*Blue lighted sonar room
of USS Atlanta
(SSN712), which was
built by Newport News.*

"What attracted me to the submarine service was the challenge and the esprit de corps," Harris says. "It was clear that the role of the submariner is important."

After finishing boot camp, a sailor can volunteer to be a submariner, and only volunteers are accepted. During two months of training at submarine school in Groton, Conn., the sailor learns about the major components and systems aboard a submarine, and begins training for his specialized assignment on the ship.

"The submarine school and the initial qualification period aboard a submarine, which lasts anywhere from eight months to a year, provides a number of opportunities to determine whether the individual really wants to be a submariner, and if he is suitable for that kind of duty," Harris notes.

It takes a particular type of individual to live and work in what is essentially a steel tube 362 feet long and 33 feet in diameter. When the ship is underway, it can remain underwater for months at a time, and the submariners' workdays are long.

"Off hours are not necessarily leisure hours," Harris says. "That time is devoted to equipment maintenance and repair, studying for future qualifications or advancement in rating, teaching skills to shipmates and administrative matters."

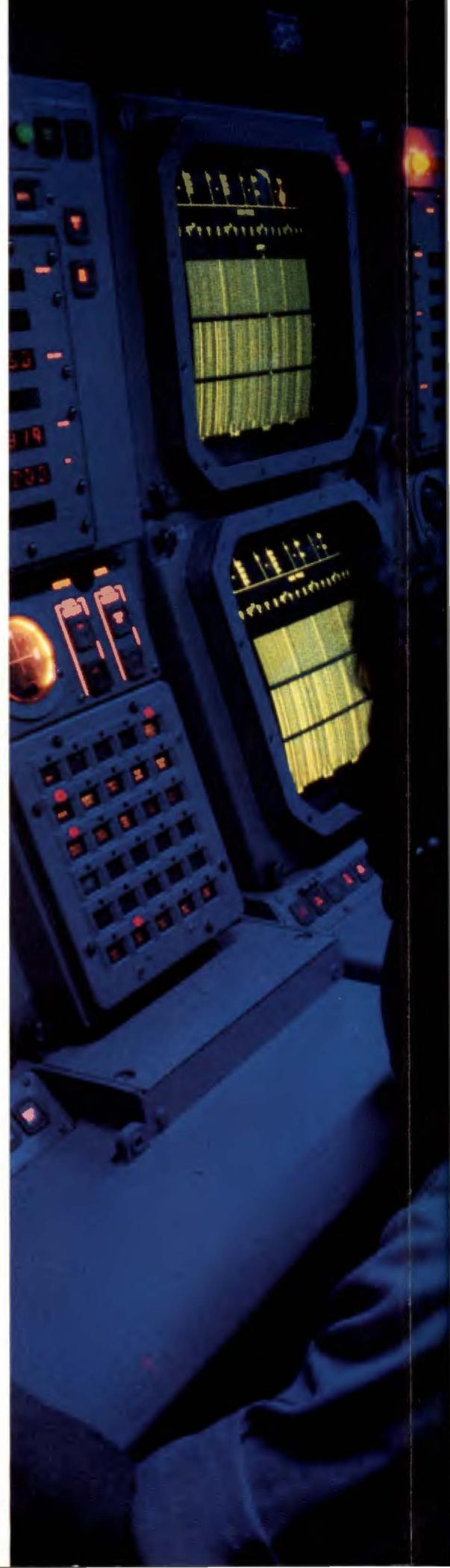
While on patrol, submariners are virtually isolated from the outside world, and receive no mail or commercial radio or television broadcasts. Their only communication comes from loved ones in the form of a 40 - word "family gram" received approximately twice a month.

"In a submarine, you have to know the guy next to you -- his strength and weaknesses. You rely on his strengths and cover his weaknesses.

"The submarine service is a real fraternity of people," Harris says. "I'm proud to be in it.

"There's a commonality among submariners. It's a goal of achieving excellence.

"On a submarine we have 130 guys who want to be perfect."



U.S. Naval Command

Left to right, top row:

The Honorable Richard B. Cheney
Secretary of Defense

The Honorable H. Lawrence Garrett III
Secretary of the Navy

Admiral Carlisle A. H. Trost, USN
Chief of Naval Operations

Admiral Bruce DeMars, USN
Director, Naval Nuclear Propulsion

Second row:

Admiral Frank B. Kelso II, USN
*Commander in Chief, U.S. Atlantic Command
and Supreme Allied Commander, Atlantic*

Admiral Powell F. Carter, Jr., USN
*Commander in Chief, U.S. Atlantic Fleet and
Deputy Commander in Chief, U.S. Atlantic Command*

Vice Admiral Daniel L. Cooper, USN
Assistant Chief of Naval Operations, Undersea Warfare

Vice Admiral Peter M. Hekman, Jr., USN
Commander, Naval Sea Systems Command

Third row:

Vice Admiral Roger F. Bacon, USN
Commander, Submarine Force, Atlantic

Captain Charles D. Wasson, USN
*Supervisor of Shipbuilding,
Conversion and Repair, Newport News*

Commander Russell Harris, USN
Prospective Commanding Officer, USS Jefferson City



At the Company's Helm

Left to right, top row:

Edward J. Campbell
President and Chief Executive Officer

W. R. Phillips, Jr.
Executive Vice President

William P. Fricks
Senior Vice President

James A. Palmer
Vice President, Engineering

Second row:

T. T. Balfour
Vice President, Marketing

Thomas J. Bradburn
Vice President, Finance

C. R. Kenney
*Senior Vice President and
General Manager, Sperry Marine Inc.*

Carl E. Whitman
Senior Vice President and General Counsel

Third row:

Jack A. Garrow
Vice President, Public Relations



Facts About **JEFFERSON CITY** **(SSN759)**

- SSN759 is the first U.S. Navy ship named after Missouri's capital.
- The submarine is 362 feet long, 33 feet in diameter and displaces 6,082 tons.
- The scheduled delivery date is 1992.
- Jefferson City* is the third submarine built through modular construction at Newport News Shipbuilding.
- The ship's first module entered the Module Outfitting Facility on October 19, 1987.
- There will be 13 officers and 120 enlisted men assigned to the ship when it is fully operational.
- Jefferson City's* mission in time of war will be to seek out and destroy enemy submarines and surface ships.
- Weaponry aboard the ship will include MK - 48 torpedoes and Harpoon and Tomahawk missiles.
- The ship will contain the Navy's new AN/BSY-1 combat control and sonar system, retractable bow planes and a hardened sail for breaking through ice during Arctic operations.
- Jefferson City* is Newport News Shipbuilding's 45th nuclear-powered submarine, and the Shipyard's 21st of the *Los Angeles* class.