

# Welcome Aboard



**USS WEST VIRGINIA  
(SSBN 736)**



Welcome Aboard USS WEST VIRGINIA (SSBN 736), the 11th of 18 Trident Ballistic Missile Submarines in the United States Navy. My officers and crew are proud of our ship and will do whatever is necessary to make your visit informative and enjoyable.

I encourage you to ask questions about all facets of submarining. Each man is highly trained and will answer almost any question that you ask. WEST VIRGINIA is one of the most sophisticated and complex warships in the world and only trained crew members are authorized to manipulate her systems, so please take care not to accidentally operate any valves, switches, or pushbuttons. An explanation and even a demonstration of most of the ship's systems will be happily provided if you desire.

Make yourself at "home" aboard WEST VIRGINIA, and again, welcome to our Navy's finest!

Commanding Officer  
USS WEST VIRGINIA



# SHIP'S INSIGNIA



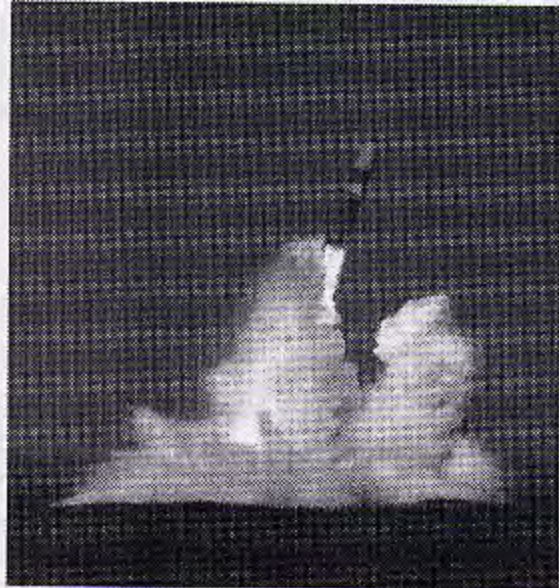
## Symbology of USS WEST VIRGINIA (SSBN 736) Crest

The focal point of the emblem is the outline of the 35th state in the Union. The irregular boundary of WEST VIRGINIA, about 1,170 miles, follows the Potomac River, the Mason Dixon Line, the Ohio River, the Big Sandy River, and the crest of the main ridge of the Alleghenies and the Blue Ridge mountains.

The silent mountaineer represents the first West Virginia pioneers who endured unimaginable horrors in grappling their proud mountainous lands from the French and their Indian allies. The traditional long rifle has been replaced with King Neptune's three-pronged spear, the Trident, the nautical symbol of our nation's third generation (after Polaris and Poseidon) Strategic Submerged Launched Ballistic Missile Program. The silent mountaineer is looking eastward across the majestic West Virginia hills toward the Atlantic ocean, the natural environment of the USS WEST VIRGINIA (SSBN 736), where she silently patrols, helping to maintain our nation's strategic maritime policy.

The submarine is a representation of a Trident Class fleet ballistic missile submarine. The motto "Montani Semper Liberi" was adopted from the State Seal, which emphatically states "Mountaineers are always free". To quote John Adams, "Posterity, you will never know how much it cost . . . to preserve your freedom. I hope you will make good use of it."

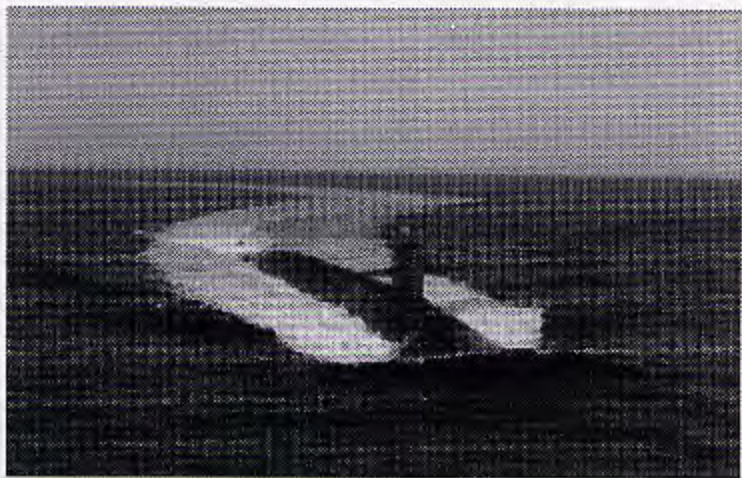
The two stars flanking the USS WEST VIRGINIA (SSBN 736) represent the two previous namesake ships, the USS WEST VIRGINIA (ACR-5), later renamed USS HUNTINGTON (ACR-5), and the USS WEST VIRGINIA (BB-48). The colors blue and gold represent the official colors of the state of West Virginia and are also representative of the Blue and Gold crews that man this submarine. The rope signifies the nautical character of the logo and is arranged in a continuum to further emphasize the Latin term "Semper", for always or forever.



## **TRIDENT MISSION**

Deterrence of war has been the sole mission and fundamental reason for the existence of the Fleet Ballistic Missile submarine program since its inception in 1960. SSBN submarines are widely acknowledged as the most survivable leg of the strategic deterrent triad and as such are the cornerstone of national security policy.

With unlimited cruising range, and endurance limited only by the crew, the Fleet Ballistic Missile submarine is capable of extended submerged operations. Because the ship's nuclear propulsion plant does not require outside air, the ship can operate continuously without the need to surface or extend a snorkel. Fleet Ballistic Missile submarines remain hidden by the ocean, their locations unknown to any potential enemy. The Trident II D-5 missile can be launched within minutes of receiving orders from the National Command Authority. Thus, the SSBN Fleet provides America a powerful and survivable deterrent force. It is manned by two complete crews, Blue and Gold, including a Commanding Officer for each crew. While one crew is operating the ship at sea, the other crew is at Kings Bay, Georgia training in preparation for the next at-sea period. Each crew rotates to the ship approximately every 112 days. This two crew concept allows the ship itself to remain at sea about 70% of the time.



## THE OHIO CLASS SUBMARINE

Ohio class submarines represent some of the latest advancements in submarine technology. These giant 560-foot, 18,750-ton ships are the nation's first line of defense, and will remain so well into the next century. They are the largest and most powerful submarines the U.S. ever built, and serve as virtually undetectable undersea missile launching platforms.

Ohio class submarines are well equipped to accomplish their assigned mission and provide significant advances over previous classes of missile submarines. Specifically:

Improved mobility, quietness and speed make this submarine the most survivable of our nation's strategic weapons systems.

Ease of maintenance has been designed into the submarines, minimizing maintenance requirements and extending the period between lengthy shipyard overhauls. Trident submarines are able to stay on patrol for longer periods with shorter times between patrols.

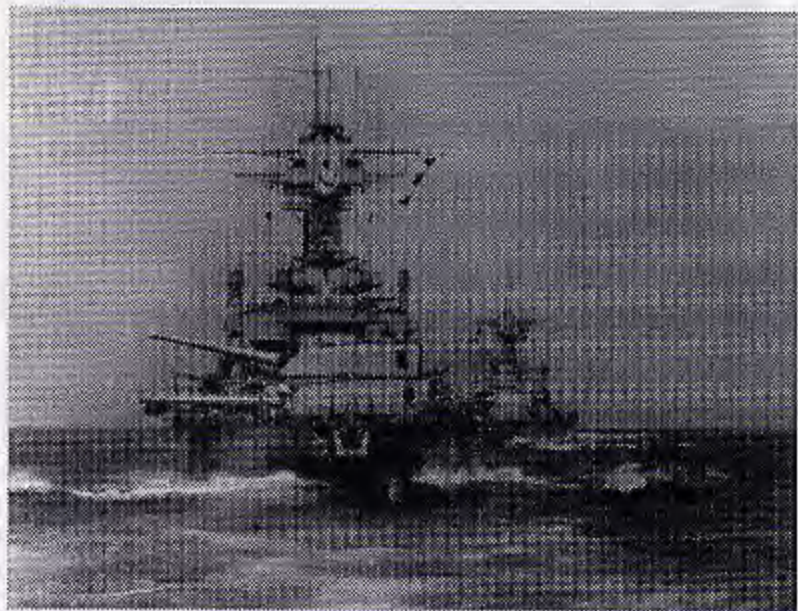
Each Trident submarine carries 50 percent more missiles than its predecessors (24 compared to 16).

The increased range of the Trident I and II missiles enables our Trident submarines to operate in 10 times more ocean area than previous Polaris/Poseidon submarines, making it more difficult for any potential enemy to locate them.

The longer missile range also permits basing Trident submarines in the United States, rather than foreign countries, at a substantial savings in logistic support. There are two bases in operation, one in Bangor, Washington, and the other in Kings Bay, Georgia.

## HISTORY OF SHIPS NAMED WEST VIRGINIA

USS WEST VIRGINIA (SSBN 736) is the first submarine and the third U.S. Naval Ship to bear the name of the state. The first WEST VIRGINIA was an Armored Cruiser (ARC-5), which was launched on April 18, 1903, at Newport News Shipbuilding Company and commissioned on February 23, 1905. It was built at a cost of four million dollars. This WEST VIRGINIA went through both name and title changes. The cruiser was renamed the HUNTINGTON in 1916, (in honor of the city in West Virginia), so that the state name could be available for the new battleship.



USS HUNTINGTON made significant contributions to American Naval Aviation by conducting important experiments with seaplane and balloon launchings. HUNTINGTON had a catapult device and equipment to accommodate four seaplanes and several balloons to aid in these experiments.

HUNTINGTON was temporarily converted to a troop transport following the signing of the Armistice in 1918, and made trans-Atlantic crossings carrying infantrymen home to the states. Reconverted to warship status, HUNTINGTON served as a flag ship of Flying Squadron ONE until 1920. HUNTINGTON was reclassified as a Heavy Cruiser (CA) when the Navy introduced a new ship numbering system in 1920. She was then decommissioned and laid up in reserve in Portsmouth, New Hampshire. HUNTINGTON was stricken from the Register of Navy Ships in 1930.

The battleship WEST VIRGINIA (BB-48) was the second vessel to bear the name. She also had a number of nicknames bestowed on her over the years, such as "Mountaineer Battlewagon" and "Old Task Force 48". Christened on November 19, 1921, WEST VIRGINIA was commissioned in 1923. The battleship was built at a cost of 11.5 million dollars, and was labeled a "super-dreadnought" because of advances in naval architecture and design. One of these advances was a three-plane air complement on its deck and a catapult for launching the aircraft.

USS WEST VIRGINIA had been engaged in a schedule of intensive training in the Hawaiian operating area just prior to Japan's attack on Pearl Harbor on December 7, 1941. She was moored alongside the battleship TENNESSEE (BB-43) in Pearl Harbor when the Japanese attack began. WEST VIRGINIA was hit by seven torpedoes and two bombs. Despite many efforts to save the battleship, it settled on the harbor bottom on an even keel.

She was refloated in the spring of 1942 and towed to Puget Sound Naval Shipyard at Bremerton, Washington for repairs and modernization. In 1944, USS WEST VIRGINIA was assigned to the U.S. Seventh Fleet where she provided considerable gunfire support in the Philippines campaign in 1944 and 1945. On August 31, 1945, USS WEST VIRGINIA took the lead of the old battleships entering Tokyo Bay, and was the only Pearl Harbor survivor in attendance for the Japanese surrender.

The ship received five battle stars for its service during World War II: Pearl Harbor-Midway, Leyte Gulf, Luzon, Iwo Jima, and Okinawa. The second USS WEST VIRGINIA was decommissioned on January 9, 1947 and stricken from the Register of Navy Ships on March 1, 1959.



USS WEST VIRGINIA (BB-48) near the Golden Gate Bridge, San Francisco Bay, with the bay ferry boat in the right background, c. late 1930's



## Commander Gregory S. Parker United States Navy

Commander Parker was born and raised in Guthrie, Oklahoma. He graduated from the United States Naval Academy in 1979 with a Bachelor of Science Degree in Engineering Physics.

Following completion of Nuclear Power and Basic Submarine training in December 1980, he served as Chemistry and Radiological Controls Assistant and Main Propulsion Assistant on USS THOMAS A. EDISON (SSN 610) homeported at Bangor, Washington until February 1984. During this tour of duty he conducted one Western Pacific deployment and decommissioned the ship.

Commander Parker then served on the staff of Commander Submarine Force, U.S. Pacific Fleet in Pearl Harbor, Hawaii as a Command Center Watch Officer. In October 1986, he reported to USS DANIEL BOONE (SSBN 629)(BLUE) in Charleston, South Carolina as Engineer Officer where he completed overhaul, conducted shakedown operations and completed one strategic deterrent patrol. He relieved as Navigator and Operations Officer on USS STURGEON (SSN 637) in January 1989 and conducted deployments to the Arctic Ocean and the Northern Atlantic.

In March 1992, Commander Parker reported to USS PORTSMOUTH (SSN 707) in San Diego, California as Executive Officer where he completed a shipyard maintenance period and conducted one Western Pacific deployment. In March of 1995, he received a Masters Degree from the Naval War College in Newport, Rhode Island. From 1995 to 1997, Commander Parker was an instructor at the Armed Forces Staff College in Norfolk, Virginia.

Commander Parker's personal decorations include the Joint Meritorious Service Medal, five Navy Commendation Medals and two Navy Achievement Medals. Ships he served on have won the Battle "E" five times and the Meritorious Unit Commendation twice.

Commander Parker is married to the former Alicia Blandford of Charleston, South Carolina. They have two beautiful daughters, Emily Kathleen and Sarah Adele and reside in Fernandina Beach, Florida.



**Commander Stephen D. Matts**  
**United States Navy**



Commander Matts is a native of Brooklyn, New York. He attended the United States Naval Academy, graduating with honors with a degree in Mathematics prior to commissioning in May 1980.

After nuclear power and basic submarine training, Commander Matts reported to PCU GEORGIA (SSBN-729) in 1982. He served as an engineering division officer and Tactical Systems Officer while the ship completed new construction testing, demonstration and shakedown operations, two strategic deterrent patrols, and a C-4 missile operational test firing. In 1986, he

transferred to shore duty as an instructor at the S8G prototype in Ballston Spa, New York.

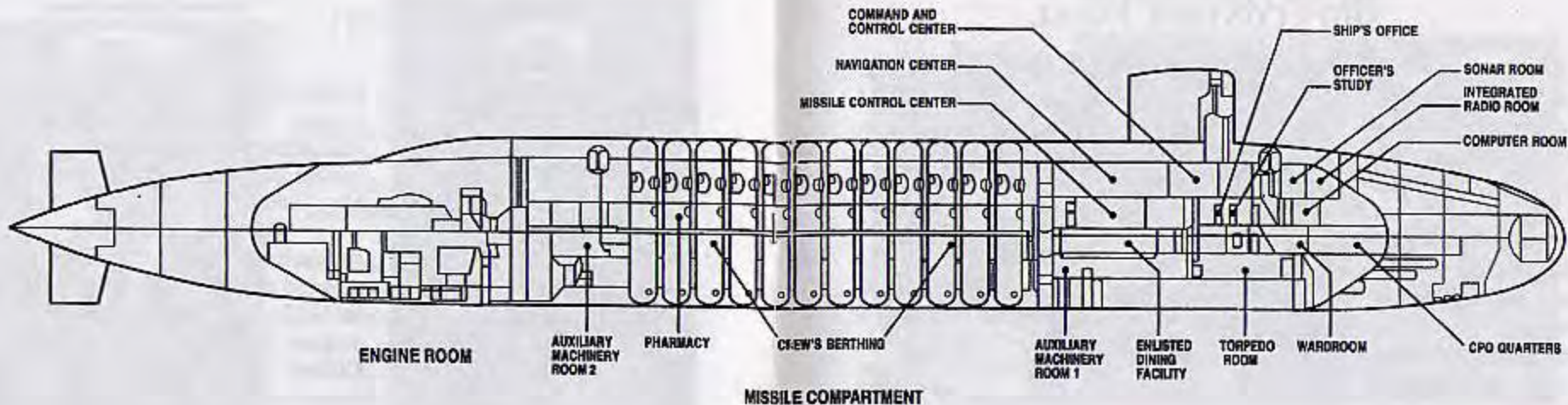
In September 1988, following completion of the Submarine Officer Advanced Course, Commander Matts joined USS FLYING FISH (SSN-673) as Navigator/Operations Officer. Here he participated in post-overhaul certifications, interfleet transfer, and a Mediterranean Deployment. He then served on the staff of the Chief of Naval Personnel in Washington, DC, for a two year tour involving submarine force manpower, personnel, and budget issues.

In July 1993, Commander Matts reported as Executive Officer of USS OKLAHOMA CITY (SSN 723). Among other operations, the ship was the test platform for technical and operational evaluations of the submarine force's newest sonar and combat control systems, and earned the Submarine Squadron Eight Battle "E" for 1995.

Commander Matts then reported to Omaha, Nebraska, where he served as Special Assistant to the Commander in Chief of United States Strategic Command. During this tour, he also earned a Master's Degree in *Business Administration from Bellevue University.*

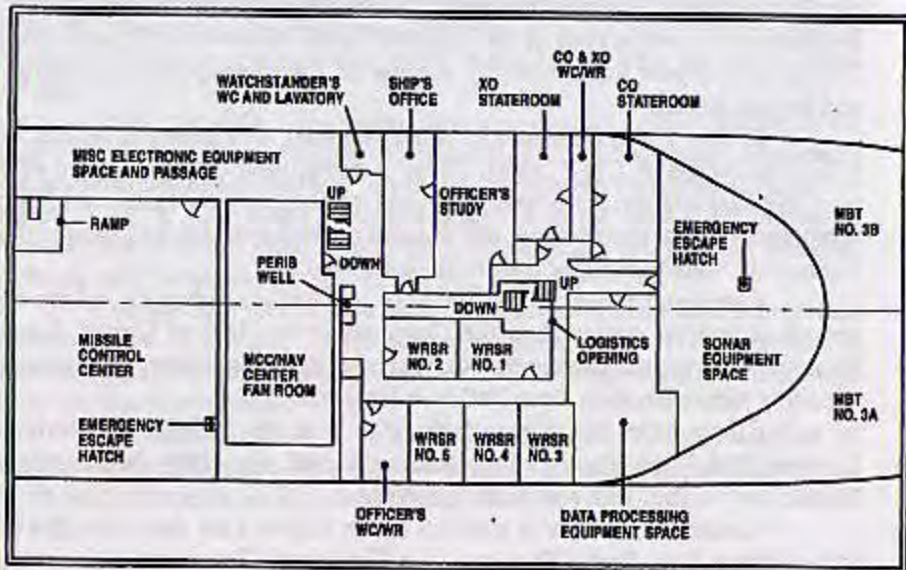
Commander Matts is authorized to wear the Defense Meritorious Service Medal, the Navy Commendation Medal, the Navy Achievement Medal, and various unit and service awards.

Commander Matts is married to the former Lori Ann Gaviglia of Staten Island, New York. They reside in Kingsland, Georgia with their two sons, Daniel and Michael.

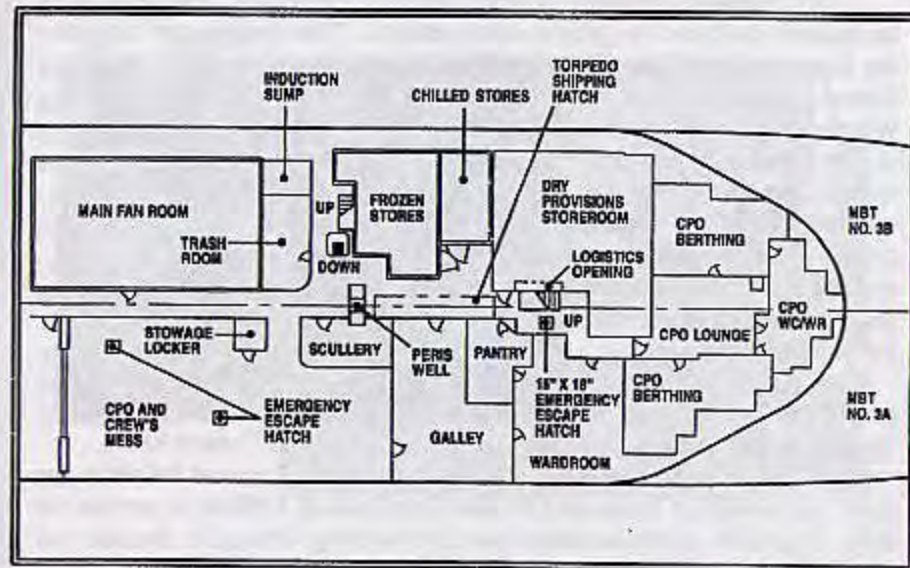


## USS WEST VIRGINIA (SSBN 736)

### Interior Diagram



**Second platform**



**Third platform**

## BALLAST CONTROL PANEL/ SHIPS CONTROL PANEL

Ballasting, diving and surfacing evolutions are controlled from the Ship's Control Panel (SCP) and the Ballast Control Panel (BCP), located in the Command and Control Center. Steering commands are issued and controlled from the SCP, commonly referred to as the "helm". Evolutions that affect the ship's trim, ventilation line-up, surfacing and diving are coordinated at the BCP.



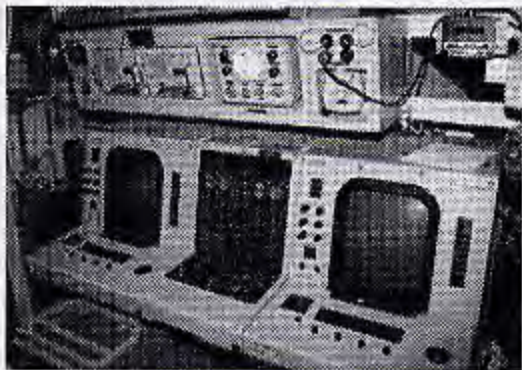
## DEFENSIVE WEAPONS SYSTEM/PERISCOPES

The Defensive Weapons System (DWS) is used to track contacts, shoot torpedoes, and launch torpedo countermeasures. The consoles are located in the Command and Control Center. The Defensive Weapons System Operator of the Watch constantly updates the solution of all contacts held by sonar, radar, and periscope systems so that the ship has an accurate picture of the surrounding waterspace.

Air and surface contacts are sighted

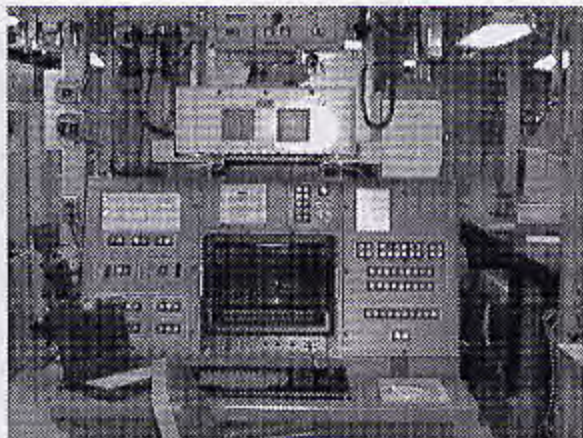
through the two periscopes located in the Command and Control Room.

The Officer of the Deck (OOD), who stands watch at the periscope stand, is the officer designated by the Commanding Officer to operate the ship. The OOD is responsible to the Commanding Officer for the safe and proper operation of all evolutions throughout the ship.



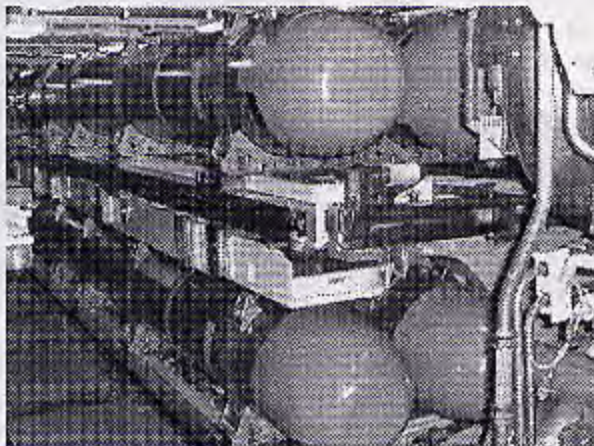
## NAVIGATION CENTER

The navigation subsystem provides a highly accurate geographic position of the ship. This data is used by the missile fire control subsystem to compute missile launch data. In addition, the ability to maintain an accurate position allows the ship to remain submerged and undetected for extended periods without the need to fix its position.



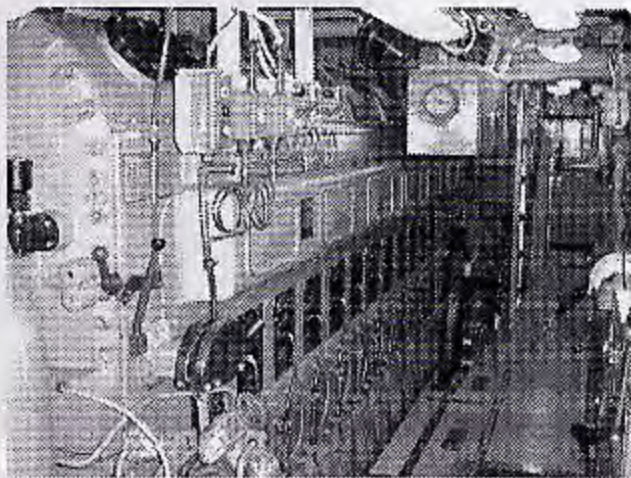
## TORPEDO ROOM

The Torpedo Room contains four torpedo tubes, two on each side in an over and under configuration, and the controls for the operation of the torpedo tubes. WEST VIRGINIA is capable of shooting the MK 48 torpedo.



## AUXILIARY MACHINERY ROOM #1

Located in Auxiliary Machinery Room #1 are various electrical motor generators and the ship's diesel engine. The diesel engine, with its attached generator, is an emergency source of electrical power. It can also be used to ventilate the ship.



## DINING FACILITIES

The Food Service Division serves approximately 50,000 meals in the crew's mess during a normal patrol. Meals are served four times a day - breakfast, lunch, dinner, and midrats (midnight rations). The officers and crew eat the same food, prepared in our galley.

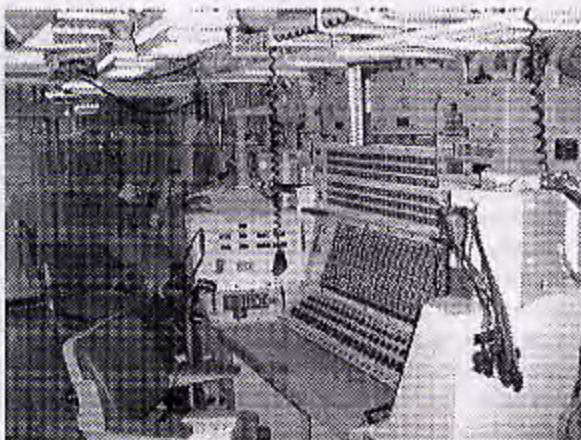


The mess decks can accommodate 40 enlisted personnel at a time. Meals are served continuously for a one hour period, which allows all personnel to eat. A five week cycle menu is used, ensuring variety throughout the patrol. The bill of fare consists of various items such as grilled steaks, chicken, pizza, lasagna and salads.

## MISSILE CONTROL CENTER

Strategic missile testing, maintenance and launch evolutions are controlled from the Missile Control Center (MCC). The Fire Control Console is the controlling station for the computer systems. The Launch Control Console monitors and controls the missile tubes and their environment before, during, and after launch. There are two watchstanders on duty in MCC around the clock.

The Weapons Officer has the firing key locked in his safe and only removes it after the Commanding Officer has authorized launch.



## MISSILE COMPARTMENT CONTROL AND MONITORING PANEL

The Control and Monitoring Panel (CAMP) is located in the missile compartment. CAMP provides the capability of controlling and monitoring temperatures and humidity for all 24 missile tubes. The controls and indications for the missile hydraulic, missile gas, and missile sea water systems are also located at CAMP.



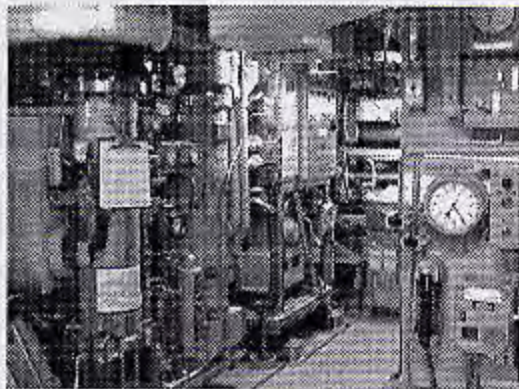
## THE PHARMACY

The Pharmacy (Sickbay), located in the missile compartment, is the working space for the hospital corpsman. The Independent Duty Corpsman is specially trained to provide medical and dental treatment to the crew. Services such as minor surgery and suturing, dispensing of drugs, and even emergency dental treatment are performed by "Doc" whenever the ship is at sea. Laboratory studies, drinking water bacteriological studies, counseling, and health record maintenance are also conducted in the Pharmacy.



## AUXILIARY MACHINERY ROOM #2

Located in Auxiliary Machinery Room #2 (AMR2) is the atmosphere control equipment required to filter and revitalize the air while the ship is submerged. Oxygen is generated by the electrolysis of water. Carbon dioxide and carbon monoxide are extracted from the atmosphere and discharged overboard, allowing the ship to remain submerged for extended periods of time without the need to surface for fresh air.



# THE PROPULSION SPACES

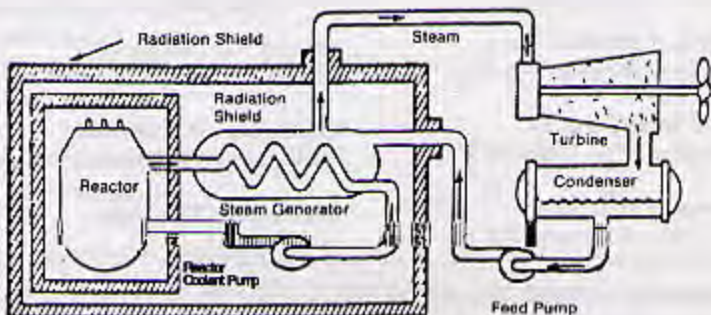
The propulsion plant of a nuclear powered ship is based upon use of a nuclear reactor to provide heat. The heat comes from the fissioning of nuclear fuel contained within the reactor. Since the fissioning process also produces radiation, shields are placed around the reactor so that the crew is protected.

The nuclear propulsion plant in the ship uses a pressurized water reactor design which has two basic systems: the primary system and the secondary system. The primary system circulates ordinary water and consists of the reactor, piping loops, pumps and steam generators. The heat produced in the reactor is transferred to the water under high pressure so it does not boil. The water is pumped through the steam generators and back to the reactor for reheating.

In the steam generators, the heat from the water in the primary system is transferred to the secondary system to create steam. The secondary system is isolated from the primary system so that the water in the two systems does not intermix.

In the secondary system, the steam flows from the steam generators to drive the turbine generators, which supply the ship with electricity, and to the main propulsion turbines, which drive the propeller. After passing through the turbines, the steam is condensed into water which is fed back to the steam generators by the feed pumps. Thus, both the primary and secondary systems are closed systems where water is recirculated and reused.

There is no step in the generation of this power which requires the presence of oxygen. This allows the ship to operate completely independent from the earth's atmosphere for extended periods of time. The fuel in the reactor's core will last approximately twenty years. During the submarine's forty year life, refueling will only be required once.







## COMMANDING OFFICERS

### BLUE CREW

**Captain J. R. Harvey**  
20 October 1990 - 6 May 1991

**Captain J. J. Demlein, Jr.**  
6 May 1991 - 3 September 1993

**Captain W. R. Large III**  
3 September 1993 - 1 May 1995

**Commander D. L. Root**  
1 May 1995 - 30 January 1998

**Commander G. S. Parker**  
30 January 1998 -

### GOLD CREW

**Captain D. G. McDermott**  
20 October 1990 - 23 April 1993

**Captain R. E. Westcott**  
23 April 1993 - 10 August 1995

**Commander D. E. Fremont**  
10 August 1995 - 8 May 1998

**Commander S. D. Matts**  
8 May 1998 -

**USS WEST VIRGINIA**  
Nuclear Powered Fleet  
Ballistic Missile Submarine

Named In Honor Of The State of  
**WEST VIRGINIA**

*Built By*  
**General Dynamics**  
Electric Boat Division  
Groton, Connecticut

KEEL LAID December 24, 1987  
LAUNCHED/CHRISTENED October 14, 1989  
COMMISSIONING October 20, 1990

**SHIP'S SPONSOR**  
Erma O. Byrd

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**USS WEST VIRGINIA (SSBN 736) Characteristics**

Length:	560 Feet
Hull diameter:	42 Feet
Draft:	36 Feet
Displacement (submerged):	18,750 Tons
Missile tubes:	24
Torpedo tubes:	4
Complement	
Officers:	15
Enlisted:	145
Total:	160

The USS WEST VIRGINIA is the eleventh Ohio Class submarine. She is the third submarine fitted with the Trident II D-5 missile system, and is homeported at Kings Bay, Georgia. With its increased range and advanced sonar and fire control systems, the USS WEST VIRGINIA is considered to be the most modern and survivable strategic deterrent in the world.



## THE SUBMARINER

Only a submariner realizes to what extent an entire ship depends on him as an individual. To a landsman this is not understandable and sometimes it is even difficult for us to comprehend, but it is so!

A submarine at sea is a different world in herself, and in consideration of the protracted and distant operations of submarines, the Navy must place responsibility and trust in the hands of those who take such ships to sea.

In each submarine there are men who, in the hour of emergency or peril at sea, can turn to each other. These men are ultimately responsible to themselves and to each other for all aspects of operations of their submarine. They are the crew. They are the ship.

This is perhaps the most difficult and demanding assignment in the Navy. There is not an instant during his tour as a submariner that he can escape the grasp of responsibility. His privileges in view of his obligations are almost ludicrously small; nevertheless, it is the spur which has given the Navy its greatest mariners - the men of the Submarine Service.

It is a duty which most richly deserves the highest, time-honored title of the seafaring world . . . "SUBMARINER".

