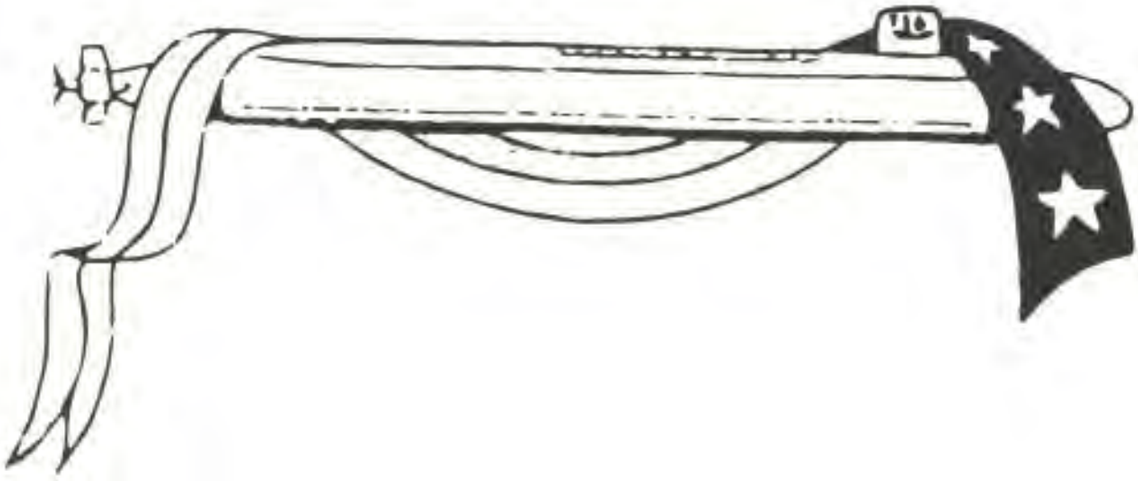
USS NEBRASKA (SSBN 739)



Welcome Aboard!

On behalf of the officers and crew of USS NEBRASKA (SSBN 739), we wish to extend a warm welcome to our guests aboard one of America's largest and most sophisticated submarines. We are indeed proud of our ship and hope your time with us will be enjoyable.

We invite you to ask questions! You'll find that the entire crew is ready, willing and able to explain the details of their operational responsibilities and the routine of submarine life. You will find these men are highly trained and capable of fielding a wide variety of questions. They routinely match their collective skills against the power of the sea and I believe you will be as impressed by them as you will be of NEBRASKA herself.

We hope during your stay aboard NEBRASKA you'll get a thorough introduction to the best of our nation's "Silent Service".

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:	150
TOTAL:	165

The NEBRASKA is the 14th TRIDENT submarine and the sixth TRIDENT submarine to be fitted with the Trident II D-5 missile system homeported at Kings Bay, GA. With her long-range missiles and advanced sonar and fire control systems the NEBRASKA is the most modern and survivable strategic deterrent submarine in the entire world.

USS NEBRASKA has been developed based on extensive considerations of all aspects of survivability and capability required in sea-based deterrent system designed for operations through the next century.

USS NEBRASKA incorporated new and quieter machinery that cannot be installed in other fleet ballistic missile submarines because of space and weight constraints.

It has an advanced sonar system comparable to that developed for the United States Navy's newest attack submarines that is capable of providing long-range detection and more effective tracking.

Key features of USS NEBRASKA include: improved maintainability, reliability, and availability resulting from modular replacement concepts of major equipment, improved design, and incorporation of integrated logistics support.

USS NEBRASKA has additional growth potential to accommodate future technology as it becomes available, both in ship systems and in larger missiles.

OHIO CLASS SUBMARINES

OHIO class (TRIDENT) submarines are the largest and most powerful submarines ever built in the free world. At 560 feet in length and 18,750 tons, they are the nation's first line of defense. They are well equipped to accomplish this task. The TRIDENTs serve as undersea intercontinental ballistic missile launching platforms that are virtually undetectable. Their improved mobility, quietness, and speed make them the most survivable of our nation's strategic systems.

Faster than their predecessors and equipped with highly accurate sensors, weapons control systems, and central computer complexes, TRIDENT submarines are armed with sophisticated MK48 anti-submarine torpedoes and TRIDENT I or TRIDENT II missiles enabling them to operate in 10 times more open ocean area than vessels equipped with Polaris/Poseidon missiles. Each vessel carries two separate crews (BLUE/GOLD) of 165 officers and enlisted men - all specialists in their respective fields.

The TRIDENT Fleet is programmed to have eighteen ballistic missile submarines by the end of the century.

USS OHIO (SSBN 726)
USS MICHIGAN (SSBN 727)
USS FLORIDA (SSBN 728)
USS GEORGIA (SSBN 729)
USS HENRY M. JACKSON (SSBN 730)
USS ALABAMA (SSBN 731)
USS ALASKA (SSBN 732)
USS NEVADA (SSBN 733)
USS TENNESSEE (SSBN 734)
USS PENNSYLVANIA (SSBN 735)
USS WEST VIRGINIA (SSBN 736)
USS KENTUCKY (SSBN 737)
USS MARYLAND (SSBN 738)
USS NEBRASKA (SSBN 739)
USS RHODE ISLAND (SSBN 740)
USS MAINE (SSBN 741)
USS WYOMING (SSBN 742)
USS LOUISIANA (SSBN 743)

THE HISTORY OF SHIPS NAMED USS NEBRASKA

USS NEBRASKA (BB-14)

The submarine NEBRASKA (SSBN 739) is the second ship to be named in honor of the 37th state of the Union.

The first NEBRASKA (BB-14), a battleship launched in 1904, joined the famed "Great White Fleet" of battleships in 1908 and departed San Francisco for various locations including Hawaii, Australia, the Philippines, Japan, and Egypt. NEBRASKA continued with the Fleet on its round-the-globe tour through Italy and Gibralter, returning to the United States in February of 1909. The battleships passed in review before President Theodore Roosevelt as they entered Hampton Roads.

Serving with the Atlantic Fleet, NEBRASKA later earned the Mexican Service Medal for operations at Vera Cruz during 1914 and 1916. During WWI, NEBRASKA first operated along the east coast in training missions and battle practice. Between December 1918 and June 1919, NEBRASKA made four voyages to France, transporting a total of 4,540 troops to and from the United States, carrying foreign veterans back to France on the final voyage.

Following transport duty, NEBRASKA joined the Pacific Fleet and participated in operations along the West Coast until being decommissioned in July 1920.

USS NEBRASKA (SSBN-739)

The keel of USS NEBRASKA was laid on December 24, 1987 at Electric Boat Division in Groton, Connecticut. NEBRASKA was christened by Patricia Exon on August 15, 1992. After successfully completing her intensive sea trials period, NEBRASKA was commissioned July 10, 1993. NEBRASKA completed her first deterrent patrol in August 1994.

Through seven deterrent patrols NEBRASKA has distinguished herself by receiving the Commander Submarine Squadron Twenty Damage Control Red 'DC', Supply Blue 'E', and Medical Yellow 'M' awards for outstanding performance. In her forward presence role, NEBRASKA was the first TRIDENT submarine to visit Europe and Halifax, Nova Scotia. NEBRASKA continues as a leader in the TRIDENT submarine force and in the strategic defense of the United States.

Melvin G. Williams, Jr.
Commander, U.S. Navy
GOLD Crew

COMMANDER MELVIN G. WILLIAMS JR., USN

Commander Williams is a native of San Diego, California. He is the son of Melvin G. Williams, a submarine force master chief petty officer (retired), and Dora R. Williams, who reside in Temple Hills Maryland.

Commander Williams graduated from Suitland High School in 1973, then enlisted in the Navy to attend the U.S. Naval Academy Preparatory School. He went on to the United States Naval Academy, graduating with merit in 1978 having earned a bachelor of science degree (mathematics) and receiving a commission as an ensign.

His first submarine assignment was as a division officer on board USS JACK (SSN 605) from January 1980 to November 1982. While on board Jack he made two Mediterranean deployments and several local operations during which the ship earned the Navy Unit Commendation and the ASW "Hook 'Em" award.

From December 1982 to June 1984 Commander Williams served as a joint service cruise missile (TOMAHAWK) project officer at Headquarters, Defense Mapping Agency, Washington D.C. During off-duty he earned a master of science in engineering degree from Catholic University.

His next submarine assignment was as an engineer officer on board USS WOODROW WILSON (SSBN 624)(GOLD) from November 1984 to February 1987. During his four strategic deterrent patrols on board WILSON the ship earned the Meritorious Unit Commendation and the Battle Efficiency Award.

Commander Williams then served on the Commander in Chief Atlantic Fleet Nuclear Propulsion Examining Board from March 1987 to June 1989. His third submarine assignment was as executive officer on board USS LOUISVILLE (SSN 724) from September 1989 to January 1992. His tour on LOUISVILLE included combat operations and the first TOMAHAWK cruise missile strike by a nuclear submarine in history during Operation Desert Shield/Storm. LOUISVILLE's awards included the Navy Unit Commendation and Battle Efficiency Award.

From February 1992 to December 1993 he was the Nuclear Enlisted Program Manager, Bureau of Naval Personnel, Washington D.C. before reporting to USS NEBRASKA (SSBN 739)(GOLD) to relieve as Commanding Officer.

Commander Williams' military awards include the Defense Meritorious Service Medal, Meritorious Service Medal, Navy Commendation Medal (five awards), and the Navy Achievement Medal (two awards). Other awards include: Defense Mapping Agency Outstanding Person of the Year, Outstanding Young Men of America, and U.S. Black Engineer of the Year -- Special Recognition in 1994 and Award for Professional Achievement in Government in 1995.

Commander Williams is married to the former Donna R. Freeland of Suitland, Maryland. They have one son, Melvin G. Williams, III.

William J. Hendrickson
Commander, U.S. Navy
BLUE Crew

COMMANDER WILLIAM J. HENDRICKSON, USN

Commander Hendrickson was born in Menomonie, Wisconsin. He enlisted into the United States Navy in 1971 and was selected for the Navy's Enlisted Scientific and Education Program (NESEP) in 1975. He attended Auburn University and graduated in 1978 with a Bachelor of Science Degree in Chemical Engineering.

Following completion of Naval Nuclear Power training and Submarine School in March 1979, Commmander Hendrickson was assigned to the USS MARIANO G. VALLEJO (SSBN 658) BLUE until October 1982. During this tour, he served as Main Propulsion Assistant/Chemistry and Radiological Controls Assistant, Damage Control Assistant, and Communications Officer. In October 1982, he reported to Naval Nuclear Power School, Orlando and taught Chemistry, Materials and Radiological Controls and served as the Assistant Director, Officer Department. After completion of the Submarine Officer's Advanced Course in February 1985, he reported to USS STONEWALL JACKSON (SSBN 634) BLUE as Engineer Officer completing two strategic patrols and a refueling overhaul. From November 1988 to March 1991, he served as Executive Officer of USS SIMON BOLIVAR (SSBN 641) BLUE. From April 1991 to September 1993, Commander Hendrickson assumed duties as the Special Assistant for Enlisted Matters, Naval Reactors before reporting to USS NEBRASKA (SSBN 739) (BLUE) to relieve as Commanding Officer.

Commander Hendrickson is entitled to wear the Meritorious Service Medal, the Navy Commendation Medal, the Navy Achievement Medal with one gold star, the Good Conduct Medal, Battle Efficiency "E" Ribbon with two "E"s, the National Defense Medal with a bronze star, the Expert Rifle Medal, and the Expert Pistol Medal.

Commander Hendrickson is married to the former Cheryl Robinson of Baraboo, Wisconsin. They are the proud parents of two children: Sandra, a graduate of Clemson University; and Michael, a junior at Auburn University.

TRIDENT MISSION

Deterrence of war has been the sole mission and fundamental reason for the existence of the fleet ballistic submarine since its inception in 1960. Strategic submarines remain among the Navy's highest priority programs and are the cornerstone of national security policy. SSBNs are acknowledged as the most survivable and dependable leg of the deterrent Triad.

With virtually unlimited cruising range and with endurance limited only by the crew, the Fleet Ballistic Missile submarine is capable of extended submerged operations in the international waters of the world which comprise 70 percent of the earth's surface. Because the submarine is nuclear-powered, it is free of the need to surface or extend a snorkel above the surface for continuous operation. Fleet Ballistic Missile submarines remain hidden by the ocean, their locations unknown to any potential enemy. The Trident II D-5 missile, powered by solid propellant, is ready to launch within minutes of receiving the command from the President of the United States. The Fleet Ballistic Missile system provides the United States with a powerful deterrent to those who might start a global war.

GENERAL INFORMATION

Welcome Aboard USS NEBRASKA!!!

We are pleased to have you with us. This pamphlet has been prepared to introduce you to the ship and crew. We hope you will find your stay interesting and enjoyable.

ORGANIZATION

The Executive Officer (XO) and Chief of the Boat (COB) have overall responsibility for the crew and visitors. Paperwork associated with your stay is handled by the Yeomen in the Ship's Office. Our Corpsman is on call twenty-four hours a day for medical problems. During working hours, he will normally be found in sickbay. The ship's daily routine is published in the "Plan of the Day", which is posted each evening throughout the ship.

BERTHING

The Supply Officer handles officer and civilian berthing assignments. The COB handles assignments for enlisted personnel. Plan to travel light, for storage space is limited. Bring toiletries you will need during your stay. In an emergency, the COB maintains a small supply of necessary items.

MEALS

Meals are served four times daily at sea and three times daily in port. Civilians should check with the Supply Officer for their eating assignments. All food should be consumed in the messing areas, as it is not allowed in bunking or working spaces. Beverages are available around the clock. In working spaces, cup holders are available. At the end of your visit, the Supply Officer is responsible for collection of your mess bills.

HEADS

"Heads" with toilets, sinks, and showers are located throughout the ship. Heads in Officer's Country and the Chief's Quarters are reserved for those areas. "Submarine Showers" are taken while underway. This simply means we shut off the water while soaping down. A special water saver valve is installed in each shower. This allows you to shut off water flow without changing the temperature. Sponges and wipers are provided for wiping down showers and sinks after each use.

LAUNDRY

For extended underway periods and when deployed, the ship runs a small laundry. Its scheduling and use is controlled by the COB.

SECURITY

As most features of a submarine are classified, the adage "what you see here, stays here" is the rule of the silent service. The Security Officer will advise you what material may be taken from the ship. He will also review any photographs that are taken. Sonar, Radio, Missile Control Center, Navigation Center, and the Engine Room are secured areas. The Security Officer will advise you as to which spaces you may enter.

WATCHSTATIONS AND EQUIPMENT

Visitors are always welcome in any authorized space. Please ask the watchstanders for permission to enter. The Chief of the Watch controls access to the Bridge. Check with him before going to and returning from the Bridge. Only watchstanders may operate equipment, valves, and switches. Cautions are posted where needed to warn of hazards and special requirements. If you have any questions, feel free to ask the watchstander responsible for the space. He will be glad to help you.

EMERGENCIES

Emergencies are announced with one of several alarms over the ship's loudspeakers. Visitors should initially stand fast but clear of doors and passageways. The crew member in charge of the space will explain the situation and advise you of what further action to take as soon as he is able. Casualty drills are frequently run, and are treated as actual emergencies. Drill controllers, wearing red ball caps, will advise you, as a visitor, what you should do.

EMERGENCY AIR BREATHING (EAB) SYSTEMS

Should an actual fire occur, the ship could quickly fill with smoke. Throughout the ship are breathing masks stowed in marked "EAB" lockers. The masks connect to fresh air manifolds located throughout the ship. A red deck tile is located beneath each manifold. As a matter of personal safety, you should become familiar with EAB locations and their uses.

THE MISSILE

USS NEBRASKA can carry up to twenty-four sixth generation TRIDENT D-5 Submarine Launched Ballistic Missiles (SLBM). This solid fuel missile is far safer than liquid fuel missiles used by other navies and can also be launched on short notice. A gas generator system is used to forcefully propel the missile above the surface where the first stage rocket motor ignites. A self-contained inertial system guides the missile's multiple warheads to their targets.

LAUNCHER

The launcher system performs three functions in supporting the Trident missile. It houses the delicate missile in a comfortable environment of controlled temperature and humidity. Since the missile is a dynamic machine, it must be serviced. The launcher system also provides a means for the Trident Technicians to cross the pressure hull boundary of the submarine to perform maintenance on the missile. Last and most importantly, the launcher can eject the missile from the submarine in a matter of minutes after the receipt of a launch command.

NAVIGATION SYSTEM

The ship's position must be known precisely for a successful missile launch. This places great importance on the accuracy of the ship's navigation system. NEBRASKA's Navigation Technicians use several navigational methods to provide a very high order of accuracy in determining the ship's position. At the heart of the system is the Electrostatically Supported Gyro Navigator (ESGN) which constantly updates the ship's position. The ship has two ESGN's, each checking the other for accuracy. External fixes can be obtained using the Global Positioning System (GPS) or NAVSAT System

FIRE CONTROL

Through the fire control system, the ship's Missile Fire Controlmen feed information to the missile. Ship location, target location and trajectory are continually supplied until the moment of launch. This allows our leaders a wide variety of targeting options in responding to a nuclear attack.

COMMUNICATIONS

NEBRASKA's mission requires constant communications. The ship's Radiomen accomplish this by using highly advanced and sophisticated equipment. Very Low Frequency (VLF) radio signals can be received under the water, thus allowing the submarine to be in constant contact while on submerged patrol.

SUPPLY

To support the ship's intricate systems for up to three months without replenishment, the Storekeepers maintain a wide variety of spare parts. These number about 95% of the range of spare parts stocked aboard an aircraft carrier. Our Culinary Specialists prepare a wide variety of food and baked goods equivalent to those found in a hotel restaurant. Working in a small space without a grocery store nearby, planning and preparing meals for the ship's 165-man crew is a challenge. Since new Seamen spend a period working as Food Service Attendants, the crew quickly learns to appreciate the galley's difficult task.

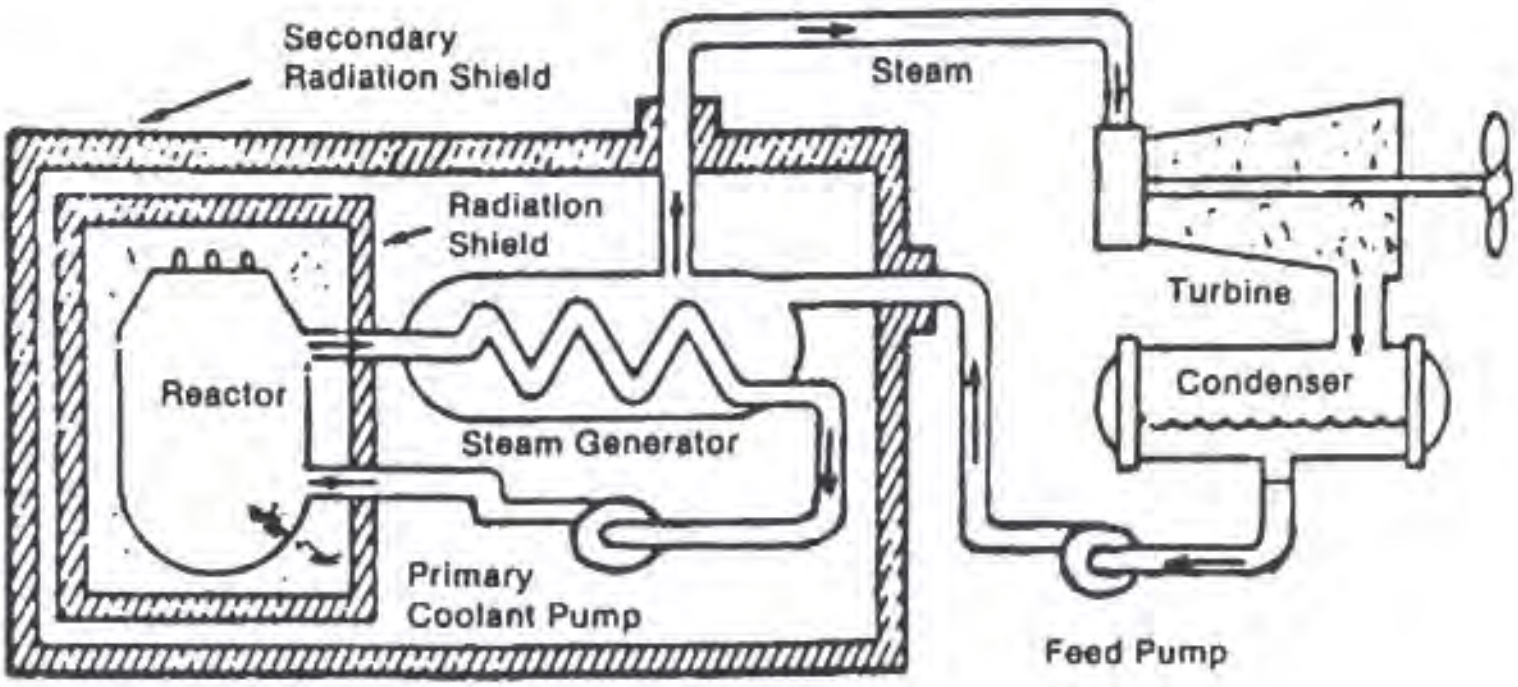
COMBAT POTENTIAL

The ship's defensive mission is carried out by the NEBRASKA's Sonarmen, Firecontrolmen, and Torpedomen. They operate integrated weapons systems that are highly effective for both self-defense and attack. The ship has four torpedo tubes from which to launch the MK-48 torpedo. The MK-48 is a high speed, deep-diving, sonar-guided weapon.

To keep the ship undetected, its machinery is sound-isolated to prevent noise from being emitted into the water. On patrol, Trident submarines are the quietest in the world.

The NEBRASKA's acoustic sensors use passive detection of noise in the water to detect the presence of other ships at great ranges. This allows NEBRASKA to avoid counterdetection from potentially hostile ships and submarines.

HOW NUCLEAR POWER OPERATES A SUBMARINE



The power plant of a nuclear submarine is based upon a nuclear reactor which provides heat for the generation of steam. This steam drives the main propulsion turbines and the ship's turbine generators for electric power.

The "primary" system is a closed loop circulating water cycle and consists of the reactor, loops of piping, pumps, and steam generators. Heat produced in the reactor by nuclear fission is transferred to the circulating primary coolant water which is pressurized to prevent boiling. This water is then pumped through the steam generator and back to the nuclear reactor where the cycle is repeated.

In the steam generator, the heat of the pressurized water is transferred to the "secondary" system to boil water into steam. This secondary system is isolated from the primary system.

From the steam generators, steam flows to the engine room where it drives the turbine generators, which supply the ship's electrical systems, and the main propulsion turbines, which turn the propeller. After passing through the turbines, the steam is condensed and the water is returned to the steam generator where the cycle is repeated.

All this is done without using oxygen, allowing the ship to operate independent of the Earth's atmosphere for extended periods of time.

During operation of the nuclear power plant, high levels of radiation exist around the nuclear reactor and people are not allowed in the reactor compartment. Heavy shielding protects the crew so that a crew member receives less radiation on a submerged patrol than he would receive ashore from natural sources.

LIFE ABOARD

On the NEBRASKA, we are a tightly knit family of about 15 officers, 20 chief petty officers, and 130 petty officers and seamen. To get assigned to the ship, we ran a gauntlet of tight screening and intensive technical schools. Once aboard, we were again challenged to qualify on watch and in submarines. As a watchstander, we were finally earning our keep after years of preparation. To "earn our dolphins", we learned the ship from bow to stern, then proved ourselves worthy to an examination board of our shipmates. As a "submariner", we were finally a full-fledged crew member and, in our eyes, the ultimate professional.

Life aboard is not the non-stop action of "Top Gun", but neither is it the sleepy boredom that you might imagine. In a word: It's busy! Although we have our exciting moments, most of what we do is the difficult job of keeping the crew and ship 100% combat ready.

Aside from casualties and cleanup, berthing is always cloaked in dim light. For sub sailors, sleep comes at a premium. We stand "one in three" six hour watches. The twelve hours off is spent training, fixing, cleaning, and when possible, sleeping. Without the sun, "day time" loses meaning. Hours are marked by events scheduled in the "plan of the day". Lectures and seminars, drills simulating every conceivable casualty, and battle stations mark the hours. If something breaks, we "fix it now", working around the clock if necessary. And it seems that we are always cleaning! "A clean ship is a happy ship," says the COB. At a moment's notice the GENERAL ALARM may sound. In minutes we are at our stations simulating missile or torpedo launch. Responding to messages from US STRATCOM and the JCS, everything is recorded to verify our strategic defense capability is always 100%.

We can't get mail or call home. Some families send pre-dated letters to be opened at sea. About every two weeks families can send a 40-word "family gram". Some grams are newsy, others encouraging, and some are inspiring. A family gram makes your day!

Bunks are equipped with an airline-like sound system, bunk light and curtain. We usually add pictures of our families, girls, and cars. It's a place to sleep, read, write, or just be alone. The center of activity has to be the mess decks. With meals, training, and nightly movies, it's the place you go to see your shipmates and swap sea stories. There's also a lounge with its nightly card games, and tiny, but well-stocked, library. We have exercise gear around the missile tubes.

Breakfast, lunch, and dinner mark changing the watch. Weekends bring a day or so of rest and a social event. The mid-patrol "Halfway Night" with its skits and contests is always a good time. After that, spirits are on a steady rise. The last few days, nothing gets you down, and you can't sleep. We call it "channel fever". Off crew is great, but before you know it, you're saying good-bye again.
Nowhere else but on a sub are so many so dependent on each other. Down there everyone is important, and we have to count on even the newest seaman to do his job. That's what makes us a family and what makes submarining special.

BLUE AND GOLD CREW CYCLE

One of the unique features of the FBM submarine program is that each of the submarines has two complete and interchangeable crews called "Blue" and "Gold". While one crew takes the boat to sea on its regular cycle of refit and a two month patrol, the other is back at Kings Bay. There, the crew members have a two week "R and R" period after their two-month confinement in the submarine. They then undergo intensive refresher training in preparation for the next patrol.

The SSBN cycle repeats every 200 days. This allows the crew to be home for holidays and the seasons they may have missed the previous year. Over a nominal three year tour, each crew member will have the opportunity to be home for two holiday seasons.

The two-crew system accomplishes several objectives. Most importantly, it enables the submarine to be at sea over eight months during the year. This means the submarine can be kept at sea for over two thirds of its operational lifetime. A SSBN at sea and submerged is essentially invisible, and hence survivable from an enemy attack. This enables proper execution of the SSBN's strategic deterrence mission.

Second, it provides a regular program of refresher training for the "Off" crew. The crews must be ready at all times while on patrol. They must be experts on their equipment to keep it running during the long patrol. Refresher training on equipment exactly like that found on the sub keeps the "off" crew sharp. Intensive instruction serves to continually upgrade their knowledge.

Finally, refinements and improvements are constantly being made to the weapons and engineering systems. These changes, which must be well understood by submariners, are thoroughly studied during offcrew.

DOLPHINS

Dolphins, the insignia of the United States Navy Submarine Service, identifies the wearer as "qualified in submarines". The officers insignia is gold, while the enlisted insignia is a silver pin. Both signify completion of approximately one year of rigorous qualification.

The submarine insignia, designed by Captain Ernest J. King, was adopted in March 1924. It is a bow view of a submarine proceeding on the surface with bow planes rigged for diving, flanked by dolphinfish in a horizontal position with their heads resting on the upper edge of the bow planes. The dolphins on this insignia are symbolic of a calm sea and are the traditional attendants of Poseidon, Greek god of the sea.

In more recent times, insignias for specialist officers in the Submarine Force have been developed. These include the Engineering Duty dolphins and Supply Corps dolphins. Regardless of the pin or insignia at the center, dolphins are worn with pride by members of the Submarine Force.

PATROL PINS

Following the tradition of the "World War II" patrol pin, the Polaris Patrol Pin is worn by SSBN crews. It recognizes their sacrifice and hard work in completing strategic patrols. One gold star marks each patrol completed. A silver star marks five patrols.

Symbology of USS NEBRASKA Insignia

BLAZON

The shield features a blue and white globe combined with a submarine to make up the Trident silhouette superimposed within an arrowhead. Its main color is red highlighted with a gold trident spear. Supporting the shield on either side are two corn stalks interlaced with a scroll in blue, displaying the motto "Defensor Pacis", or Defender of Peace - inscribed in white letters.

SYMBOLISM

Dark blue and gold are the colors traditionally associated with the U.S. Navy. Red is emblematic of valor and action while gold stands for excellence and high achievement. The shield simulates an arrowhead and recalls Nebraska's heritage (Nebraska is the Indian word for the state's major river, the Platte). The submarine silhouette and globe depict the world-wide mission of the USS Nebraska.

The trident symbolizes sea prowess and naval weaponry. Its spike indicates the "depths", emphasizing a submarine's capabilities and theater of operations. The cornstalks refer to Nebraska's official nickname, the "Cornhusker State", highlighting the designation of SSBN-739.

SEAL

The coat of arms is emblazoned upon a white background and enclosed within a dark blue oval band edged in red on the inside and with a gold rope on the outside, bearing two gold stars of excellence on either side and inscribed "USS NEBRASKA" at the top and "SSBN-739" at the bottom in white.