

GENERAL DYNAMICS



**USNS *William McLean*
(T-AKE 12)
Christening Ceremony
April 16, 2011**



Music
Grand Pacific Band

**USNS *William McLean* (T-AKE 12)
Christening Ceremony Program**

Presentation of Colors
Marine Corps Air Station Miramar Color Guard

Soloist
Dr. Juliette Singler, Associate Music Professor, Point Loma Nazarene University

Invocation
Captain Emilio Marrero, USN, U.S. Navy Chaplain Corps, Force Chaplain for Commander Naval Surface Forces

Remarks
Mr. Frederick J. Harris, President, General Dynamics NASSCO
Mr. Arthur W. Divens, Jr., Executive Director, Amphibious Warfare and Sealift Office
Rear Admiral Mark H. Buzby, USN, Commander, Military Sealift Command

Principal Speaker
Vice Admiral David J. Venlet, USN
Program Executive Officer, Joint Strike Fighter Program

Sponsor
Mrs. Margaret M. Taylor

Matrons of Honor
Mrs Rosemary W. McLean
Mrs. Virginia M. Rembold

Flower Girl
Miss Jessica Iwane, daughter of Paul Iwane, Electrical Supervisor, General Dynamics NASSCO

Master of Ceremonies
Mr. James H. Gill, Jr., Director of Communications, General Dynamics NASSCO

William and LaVerne McLean at Santa Barbara

Mrs. Margaret M. Taylor
Sponsor

Margaret Taylor is the eldest niece of Dr. William McLean. A native of Los Angeles, California, Mrs. Taylor now lives in Carmichael, California with her husband, Ronald. They have been married 37 years.

Mrs. Taylor attended Occidental College in Los Angeles, California, where she earned a Bachelor of Arts degree in Choral Music, with a minor in Mathematics in 1967. She also earned a Master of Arts degree in Education in 1999 from the University of La Verne in La Verne, California.

In her career as an educator, Mrs. Taylor taught mathematics in Grant Joint Union High School District, Rio Tierra Junior High and Don Julio Junior High in Sacramento, California. She retired from teaching in 2003, after 33 years.

Mrs. Taylor is an active supporter of the Northminster Presbyterian Church. She volunteers for Loaves and Fishes, a community outreach program serving the homeless, and Sacramento City Animal Care. She also performs in a community handbell choir.



Mrs. Rosemary W. McLean
Matron of Honor



Rosemary McLean is a sister-in-law of Dr. William McLean. She is the wife of his younger brother, Robert N. McLean, Jr. Mrs. McLean was born in Glendale, California and grew up in Laguna Beach, California. She currently resides in Bandon, Oregon.

Mrs. McLean earned a Bachelor of Arts degree from Occidental College in 1941. She served as Youth Worker and Church Secretary at the Community Presbyterian Church in Laguna Beach during her college summers and continued to do so until her marriage. Since then, she has also supported her local church and community as Permanent Clerk, Sacramento Presbytery; Moderator for Sierra Synod Presbyterian Women; and as Secretary and Finance Committee Chair for National Presbyterian Women.

Mrs. McLean has four children: Margaret Ann, Elizabeth Diane, Robert Frederick and Virginia Lee. She has nine grandchildren and six great-grandchildren.

Mrs. Virginia M. Rembold
Matron of Honor

Virginia “Ginger” Rembold is a niece of Dr. William McLean and younger sister of the ship’s sponsor Margaret Taylor. Mrs. Rembold was born in Yakima, Washington. She married Rick J. Rembold in 1983 and moved to Baker City, Oregon, where they still reside today. The Rembolds have two sons: Jedediah and Luke.

Mrs. Rembold earned a Bachelor of Arts degree in Health and Physical Education from Lewis and Clark College, Portland, Oregon, in 1976 (magna cum laude), and a Master of Arts degree in Teaching from Lewis and Clark College in 1982.

Upon graduation in 1976, Mrs. Rembold settled in Gresham, Oregon and worked at a small rural school in east Multnomah County. After a break from teaching to raise her children, she returned to the classroom in 1998.

Mrs. Rembold is an active member of the First Presbyterian Church. She has served as Baker County Coordinator for the Church World Service CropWalk; Summer Youth Tennis Director; Baker Family YMCA Board Member; and as a contributor at the Crossroads Arts Center.



William Burdette McLean

William Burdette McLean was a United States Navy physicist, who conceived and developed the heat-seeking *Sidewinder* missile. The *Sidewinder* was the first truly effective air-to-air missile; its variants and upgrades are still in active service.

William McLean was born May 21, 1914 in Portland Oregon, the son and grandson of Presbyterian ministers. He was drawn to mechanical things at an early age. His father believed in self-reliance and practical skills, teaching him how to repair automobiles, build homes and do plumbing and electrical wiring. As a boy he built surfboards, canoes, rafts, and his own photographic enlarger. A quiet, serious young man of high principles, he was good at science and mathematics in high school. He entered the California Institute of Technology in 1931 where he earned three degrees in physics, finishing with a doctorate in 1939. One professor, Charles Lauritsen, observed that William McLean sometimes seemed more interested in the laboratory equipment than in the measurements it produced.

World War II brought Dr. McLean to the National Bureau of Standards (NBS) where his mechanical abilities were quickly recognized, and he became head of the Mechanical Design Section of the Ordnance Division, designing the arming devices for proximity fuzes. He also

worked, while at NBS, on a guidance system for the Bat missile, a large glide bomb. Jacob Rabinow, an inventor who worked under him at NBS remembered Dr. McLean as the “best engineer I have ever known.”

At war's end McLean went to the Naval Ordnance Test Station (NOTS) on a visit he expected to last two months. He stayed there for twenty-two years. In 1954 he was named technical director, assuming a major role in shaping programs and policies at what had become one of the Navy's most important laboratories. NOTS—today the Naval Weapons Center—was a product of lessons learned during the war about what science and technology could accomplish given sufficient leadership, money, and staff. It was set up in 1943 as a “unique experiment in civilian-military partnership,” to be run by the military under naval commanding officers but with civilian technical directors. NOTS was to be a full-spectrum laboratory, with all the personnel and equipment needed to take ideas from the first rough sketch through full development and even initial production. It was a good fit for Dr. McLean, as he firmly believed that test results, not argument or calculation, should be the ultimate arbiter. Some members of NOTS nervously compared themselves



William Burdett McLean



Dr. McLean explains Sidewinder's components



Dr. McLean briefs President Kennedy during a visit to NOTS

with much bigger operations at work on other missiles. One asked: “How can we compete?” The response: “We have a secret weapon: Bill McLean.”

His concept for *Sidewinder* was a “fire and forget” guided missile using infrared sensors in the nose that would detect the heat radiated from an enemy jet. Using this radiation as its source of guidance information, the missile would track the target no matter how it maneuvered to avoid intercept. Concentrating on the needs of his customer, the combat pilot, Dr. McLean set to work to create a simple, inexpensive, easy-to-use missile. On September 11, 1953, the first successful firing on a target drone was accomplished. Sidewinder released for naval fleet use in January of 1956 and first used in combat in 1958.

In 1967 Dr. McLean was named director for the Navy’s new Submarine Warfare Research Center, a post he held until 1974.

He was recognized for his achievements

during his lifetime with several awards, including the NOTS L.T.E Thompson Award, the President’s Award for Distinguished Federal Service, the Rockefeller Public Service Award for Science, Technology and Engineering, and the IEEE Harry Diamond Award for outstanding leadership of development in guided missiles and undersea exploration and transport. He was elected to the National Academy of Engineering in 1965 and the National Academy of Sciences in 1975. The Memorial Award for Dr. William B. McLean was established in 1968, to recognize creativity in employees who furthered the mission at China Lake with significant inventions. The Dr. William B. McLean Laboratory at the Naval Weapons Station, was dedicated in 2010. T-AKE 12, the 12th ship in the Lewis and Clark class, is named USNS *William McLean* to honor Dr. McLean’s achievements.

William McLean was married to Edith LaVerne “LaV” McLean and had three sons, William, Donald and Mark. Dr. McLean died in San Diego, California in 1976.



President Eisenhower presents Dr. McLean the Distinguished Federal Service Award



Dr. McLean’s submersible project



Mr. Frederick J. Harris
President,
General Dynamics NASSCO

Mr. Frederick J. Harris was named president of General Dynamics NASSCO and a vice president of General Dynamics Corporation on January 1, 2006.

Prior to that, Mr. Harris was the senior vice president of programs at General Dynamics Electric Boat, where he was responsible for the execution of all submarine design, construction and repair programs.

Mr. Harris began his shipbuilding career in 1973 as a senior engineer for Electric Boat's Trident ballistic missile submarine program. For his accomplishments later as program manager of the Virginia-class submarine design phase, Mr. Harris received the Maine Maritime Academy Outstanding Alumni Award for the Year 2000 and, in 2002, received the annual William M. Kennedy Award from the Society of Naval Architects and Marine Engineers. In 2003, he was included on the Maine Maritime Academy's Wall of Honor for his accomplishments in the marine field. He was the 2010 recipient of the Harold E. Saunders Award, given by the American Society of Naval Engineers, for his significant contributions to naval engineering.

Mr. Harris was born in Framingham, Massachusetts. A 1963 graduate of Hopkinton High School, he graduated from the Maine Maritime Academy in 1967 with a bachelor's degree in Marine Engineering. He sailed for several years as a U.S. merchant marine, notably aboard the U.S. registered SS *Transglobe*, the most decorated American merchant ship of the Vietnam War. He holds a Coast Guard chief engineer's license of unlimited horsepower. In 1972, he received a master's degree in business administration from Babson College, graduating with distinction.

Rear Admiral Mark Buzby is a 1979 graduate of the U.S. Merchant Marine Academy, where he received a bachelor's degree in Nautical Science and a U.S. Coast Guard Third Mate's license. He was commissioned as a naval officer in June 1979, is a graduate of the Joint Forces Staff College and holds master's degrees from the U.S. Naval War College and Salve Regina University in Strategic Studies and International Relations.

As a surface warfare officer, Rear Admiral Buzby has deployed aboard USS *Connole* (FF 1056), USS *Aries* (PHM 5), USS *Yorktown* (CG 48) and USS *Shiloh* (CG 67). He served on the staff of U.S. Sixth Fleet. His at-sea commands include USS *Carney* (DDG 64), during the ship's first Mediterranean/Persian Gulf deployment, and Destroyer Squadron 31, which made two deployments in support of operations Southern Watch and Enduring Freedom. Ashore, he served on the Navy staff and on the staff of the Joint Chiefs of Staff. He also commanded the Navy's Surface Warfare Officers School.

As a flag officer, Rear Admiral Buzby again served on the Navy staff, first as the deputy for Surface Ships, then as the deputy for Surface Warfare, and later as the deputy for Expeditionary Warfare. He also commanded Joint Task Force Guantanamo, and most recently was the deputy chief of staff for Global Force Management and Joint Operations for U.S. Fleet Forces Command.

Rear Admiral Buzby assumed command of Military Sealift Command in October, 2009.



Rear Admiral Mark H. Buzby, USN
Commander
Military Sealift Command



Mr. Arthur W. Divens, Jr.
*Executive Director,
Amphibious Warfare and Sealift Office*

Mr. Art Divens currently serves as the Executive Director, Amphibious Warfare and Sealift Office, within Program Executive Office, Ships. He provides executive leadership to 150 personnel and oversees one of the broadest acquisition portfolios in the Navy, including more than \$30 billion in complex shipbuilding procurements.

Mr. Divens entered the Senior Executive Service in April 2000, and has been in the civil service for more than 30 years. He has served in a variety of key leadership positions throughout his career. During his tenure as Program Manager (PM), PMS 325 (2000-2003), the program delivered 14 ships to the Navy from seven different ship classes. He also served with distinction as Program Manager, National Shipbuilding Research Program; Assistant Program Manager, PMS 325; Assistant Program Manager for T-AGS 45, PMS 325; Fleet Introduction Manager for the Military Sealift Command and Undersea Surveillance Operations Engineer for the Space and Naval Warfare Systems Command. Mr. Divens is widely recognized for his expertise in the field of shipbuilding and for spearheading initiatives focused on improving shipbuilding processes and technology. Mr. Divens received his Bachelor of Science Degree from the U.S. Merchant Marine Academy in Kings Point, New York in 1979 and his Master of Science Degree from the University of Maryland in 1997. He is also a 1991 graduate of the Defense Systems Management College, Program Management Course.

During his distinguished career, Mr. Divens has received several awards, including the Navy Distinguished Service Medal, two Superior Service medals and the Navy Civilian Meritorious Service Medal.

Vice Admiral Venlet is the Program Executive Officer for the Joint Strike Fighter Program. He previously served as commander Naval Air Systems Command (NAVAIR), headquartered in Patuxent River, Maryland. Other flag tours include program executive officer, Tactical Air Programs and commander Naval Air Warfare Center, Weapons Division, with responsibility for Navy weapons and systems research, development, testing and engineering and fleet support capabilities at China Lake and Point Mugu, California. He served as NAVAIR assistant commander for test and evaluation, and for shore installation management.

Fleet tours include VF-41 as an F-14 *Tomcat* radar intercept officer embarked on USS *Nimitz*. He wears the Distinguished Flying Cross for action in VF-41. After redesignation as a naval aviator he flew with VF-143 as an F-14 pilot embarked on USS *Dwight D. Eisenhower* and with VF-101 at NAS Oceana as a *Tomcat* instructor pilot and A-4 adversary pilot.

Vice Admiral Venlet's tours in Naval Air Systems Command include Strike test pilot at Naval Air Test Center, Patuxent River, the F/A-18 program in various capacities including class desk officer and deputy program manager. He was executive assistant to the commander, Naval Air Systems Command and served as program manager for Air-to-Air Missiles involving AIM-9X development.

Vice Admiral Venlet is from Pottstown, Pennsylvania, and graduated from the U.S. Naval Academy. He is a graduate of the Naval Postgraduate School and U.S. Naval Test Pilot School and is a member of the Society of Experimental Test Pilots. He holds a bachelor's degree in Systems Engineering and master's degree in Aerospace Engineering.



Vice Admiral David J. Venlet, USN
Program Executive Officer
Joint Strike Fighter Program

USNS *William McLean* (T-AKE 12)

Designed and built by General Dynamics NASSCO

Mission: To deliver ammunition, provisions, stores, spare parts, potable water and petroleum products to strike groups and other naval forces, by serving as a shuttle ship or station ship. T-AKE 12 will be the first Lewis and Clark class ship to support U.S. Marine Corps operations in the Maritime Prepositioning Force.



*Start of Construction
September 22, 2009*

*Keel Laid
March 26, 2010*



August 6, 2010

Design Particulars:

Length: 210 Meters (689 ft.)
Beam: 32.2 Meters (105.6 ft.)
Draft: 9.1 Meters (29.8 ft.)
Displacement: 40,950 Metric tons
Speed: 20 Knots

Max dry cargo weight: 6,700 Metric tons
Cargo potable water: 52,800 Gallons
Cargo fuel: 23,450 Barrels
Propulsion: Single screw, diesel-electric



November 5, 2010



February 15, 2011

March 28, 2011

Acknowledgements

Start of Construction Honoree: Mrs. Rosie Eckberg

Keel Honoree: Mrs. Tess Landay

1st Shore Honoree: Mrs. Michelle Black

Trigger Honoree: : Mrs. Pam DiNapoli

Program images courtesy of the China Lake Naval Test Center and Mr. Donald McLean.

Ship construction photos by Ken Wright, NASSCO staff photographer.

A History of Naval Christening & Launching

The christening and launching of a ship is one of the oldest naval traditions. Many seafaring civilizations have maintained a tradition of formally dedicating a ship into their fleet. Although it has changed dramatically across centuries, this tradition nonetheless remains one of the most important events in today's Navy.

The christening tradition is believed to have originated in Viking culture. High priests served as masters of ceremonies, which involved offering sacrifices to the gods in exchange for safety at sea.

Ancient Greeks and Romans likewise held an official ceremony to induct a ship into the fleet and ask for her protection in the water. Unlike the Vikings, the Greeks and Romans used water to purify the ship before her maiden voyage. As Christianity spread during the latter days of the Roman Empire and into the Middle Ages, the christening ceremony adopted a religious interpretation. Statues and shrines often adorned the vessel and wine was used in her blessing.

During the sixteenth century, christenings became ceremonies of trumpeted fanfare. One of the King's own Lieutenants was escorted on the ship and presented with a goblet of red wine. As part of the celebration, he would take a ceremonial first sip and whisper the ship's name, asking that she be bestowed with good luck and safe passage.

Near the end of the seventeenth century, the goblet was replaced by a bottle, originally of wine. Wine, however, was soon replaced by champagne and the popular tradition of breaking the bottle over the bow with the phrase "I christen thee in the name of..." began.

No mention of christening a Continental Navy ship during the American Revolution has come to light. The first ships of the Continental Navy, *Alfred*, *Cabot*, *Andrew Doria*, and *Columbus*, were former merchantmen and their names were assigned during conversion and outfitting. Later, when Congress authorized the construction of thirteen frigates, no names were assigned until after four had launched.

The first description we have of an American warship christening is that of *Constitution*, famous "Old Ironsides," in Boston, Massachusetts on October 21, 1797. Her sponsor, Captain James Sever, USN, stood on the weather deck at the bow. "At fifteen minutes after twelve she commenced a movement into the water with such steadiness, majesty and exactness as to fill every heart with sensations of joy and delight."

As *Constitution* ran out, Captain Sever broke a bottle of fine old Madeira over the heel of the bowsprit.

Just as the passage of years has witnessed momentous changes in ships, so also has the christening-launching ceremony we know today evolved from earlier practices. For example, the bottle is stored at room temperature to enhance the champagne's fizz, making a better photo opportunity. As a safety precaution, the bottle is usually placed inside a protective mesh netting to prevent flying glass. Nevertheless, the tradition, meaning, and spiritual overtones remain constant. The vast size, power, and unpredictability of the sea must certainly have awed the first sailors to venture far from shore. Instinctively, they would seek divine protection for themselves and their craft from the capricious nature of wind and water. And so it remains today.



An Introduction to T-AKE Class Ships

USNS *William McLean* will be the twelfth addition to the Navy's Lewis and Clark (T-AKE) Class of dry cargo/ammunition ships. With enhanced capabilities, this ship class was designed to replace the Navy's aging Ammunition Ships and Combat Stores Ships. The Lewis and Clark Class will also replace current Fast Combat Support Ships when operating in concert with an oiler.

Designed to operate independently for extended periods at sea while providing replenishment services to U.S. and NATO ships and as an auxiliary support ship, T-AKE class ships contribute to the Navy's ability to maintain a forward presence. These ships provide logistic lift from supply sources such as ports or at sea from specially equipped merchant ships by consolidation. Their cargo consists of ammunition, food, limited quantities of fuel, repair parts, and ship stores, as well as expendable supplies and materials.

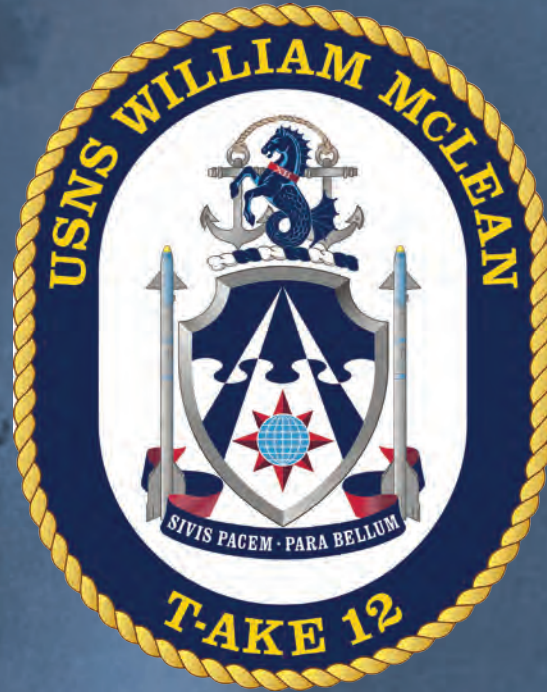
The primary mission of the Lewis and Clark Class is to shuttle a steady stream of ammunition, spare parts and provisions (dry, refrigerated and frozen) to naval forces at sea. The existing shuttle ships are single product ships that specialize in either combat or ammunition; their primary role is to resupply the station ship. T-AKE Class ships can be used as a single product ship, but also as a two or three product ship. Recently T-AKE Class ships have supported humanitarian relief efforts around the world.

The T-AKE Class is able to remain on station with the battle group if the situation dictates. This is the secondary mission of the class. Depending on the tactical situation, these ships may be required to operate in concert with a T-AO class ship as a substitute station ship to provide direct logistics support to the ships within a battle group.

Naming the Lewis and Clark Class

The Navy's new class of replenishment ships has been named to honor legendary pioneers and explorers. The lead ship, *Lewis and Clark* (T-AKE -1) was named after the early frontier explorers who traversed America's vast wilderness. The second ship USNS *Sacagawea* (T-AKE 2) is named after the young Native American woman whose navigation and interpretive skills were crucial to the success of Lewis and Clark's Corps of Discovery. It is one of the few United States Navy ships named for a woman. The third ship in the T-AKE Class is named USNS *Alan Shepard*, after astronaut Rear Admiral Alan B. Shepard, Jr., the first American to venture into space. The fourth is named USNS *Richard E. Byrd*, after polar explorer, Rear Admiral Richard E. Byrd. The fifth ship in this class is named USNS *Robert E. Peary*, after the Arctic explorer, Rear Admiral Robert Peary. USNS *Amelia Earhart* is the sixth T-AKE Class ship, named after the pioneering pilot famous

for her courage, vision, and groundbreaking achievements, both in aviation and for women. T-AKE 7 is named USNS *Carl Brashear*, after Master Chief Boatswain's Mate (Master Diver) Carl Maxie Brashear, who displayed extraordinary courage and perseverance in becoming one of the first African Americans to achieve qualification as a Master Diver in the U.S. Navy. USNS *Wally Schirra* (T-AKE 8) is named in honor of Navy Captain Walter M. Schirra, Jr., the command pilot of the GEMINI 6 mission in December 1965 that accomplished the first rendezvous of two manned maneuverable spacecraft. Captain Schirra is the only astronaut to have flown MERCURY, GEMINI, and APOLLO missions. The ninth ship in the fleet is USNS *Matthew Perry*, named for Commodore Matthew Calbraith Perry, who signed the Treaty of Kanagawa with Japan in 1854, officially establishing a relationship and the opportunity for trade with the previously isolated nation. USNS *Charles Drew* (T-AKE 10) honors Dr. Charles R. Drew, a physician and medical researcher whose pioneering work in the late 1930s and early 1940s led to the discovery that blood could be separated into plasma. T-AKE 11 was named for Captain Washington Chambers, in addition to his ship and torpedo design was responsible for aviation in the Bureau of Navigation and arranged for the first take-off and landing of an aircraft on a ship.



USNS William McLean (T-AKE 12)

Sidewinder missile tests at Naval Weapons Station China Lake: Sidewinder takes its name from the Mojave Desert Sidewinder rattlesnake. Like the snake, Sidewinder has a winding motion in pursuit of the target and detects its prey by sensors in the nose.