

NASA Motor Vessel (MV) Retriever

The NASA Motor Vessel (MV) Retriever was one of 128 Landing Craft Utility (LCU) 1466 Class (Photo #1) built for the U.S. Navy and Army in 1953-55. LCU 1466 Class were enlarged versions of the World War II built Landing Craft Tank (LCT) Mk 5's. Originally built at the Avondale Shipyards in New Orleans in 1954, the Retriever, LCU-1530¹ was acquired by NASA under a reimbursable loan agreement dated March 4, 1963, from the U.S. Army at Ft. Eustis, Virginia. After modifications for NASA use (the sides of the vessel's midsection were cut down, a new bridge built, and a hoist added²) at a shipyard in Mobile, Alabama, it arrived at its Seabrook, Texas docking facility near the NASA Manned Spacecraft Center (MSC) in June 1963 (Photo #2). Additional Retriever modifications were performed during 1965 to make it more operationally suitable for NASA spacecraft postlanding systems and recovery operations testing. Performed by Todd Shipyards of Houston, Texas, the modifications included a larger bridge, expanded crew quarters and galley, and provisions to mount the Gemini/Apollo davit retrieval crane^{3,4}. Annual maintenance was performed by Bludworth Shipyards, also of Houston.

The modified Army LCU, painted NASA blue and white, was named "Retriever" to signify its mission of recovering spacecraft. The LCU was selected because its shallow draft, which allowed it to operate in Galveston Bay as well as in the Gulf of Mexico off of Galveston, Texas. As an open sea test facility, the Retriever was used for Gemini and Apollo postlanding suitability tests, spacecraft drop tests from aircraft, Apollo spacecraft uprighting tests, Gemini and Apollo flotation collar tests, qualification of shipboard recovery equipment, and other spacecraft recovery systems qualification testing programs⁵ (Photos #3, #4 & #5). The Retriever was also used to train all United States astronaut flight crews for post-splashdown ocean recovery operations and water egress training from their Gemini spacecraft and Apollo command modules until 1972 (Photos #6 & #7).

At NASA-MSC, the Retriever was operated under the jurisdiction of the Flight Operations Directorate's Landing and Recovery Division. The first skipper of the NASA MV Retriever was Frank Gammon, who had extensive U. S. Army landing craft experience and a Coast Guard marine license. Commander Dino Bernardi of the Coast Guard took over as skipper in 1971.

The Retriever title was permanently transferred to NASA from the Army on February 5, 1969, so that ownership could be locked in and operation not be

interrupted in the event of a national emergency requiring reclaiming by the Army⁶. In 1972, NASA transferred the MV Retriever to the Virginia Institute of Marine Science (VIMS) in Gloucester, Virginia, where it was used to support marine research in the Chesapeake Bay area until it was retired.

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Written By:

Coye Mac Jones

NASA-MSC/LRD Vehicle Project Engineer in 1964-71

Retired NASA-Johnson Space Center/Houston in January 2003

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U.S. Army LCU 1466 Class

Length: 119 feet

Beam: 34 feet

Draft: 6 feet

Deck Area: 1,850 sq. ft.

Speed: 10 knots

Range: 700 nm @ 7 knts

Displacement: 180 tons (light) 360 tons (full)

Dead Weight: 180 tons

Military Lift: 150 tons cargo or 400 marines

Diesel Fuel: 27,316 gallons

Armament: 1 x 20 mm AA gun, 2 x .50 cal guns

Crew: 14 persons

Propulsion: three Grey 12V-71 (675 hp) x 3 shafts

Reference: Atoll Institute (<http://atollinstitute.org/LCU.htm>)

Photos:



1. LCU 1466, the postwar prototype LCT, is shown at her builders, Island Dock Company of Kingston, New York, 16 December 1953.



2. NASA MV Retriever in Clear Creek Channel off Galveston Bay in 1963 after delivery to NASA (Photo Credit: NASA S-63-8698).



3. NASA MV Retriever on Galveston Bay during postlanding tests with Mercury/Gemini boilerplates in 1963.



4. NASA MV Retriever in Gulf of Mexico off Galveston for Gemini postlanding tests with Static Article 5 in 1964.



5. NASA MV Retriever in Gulf of Mexico off Galveston for Apollo Block II postlanding qualification tests with Command Module 007A in April 1968 (Photo Credit: NASA S-68-30160).



6. The Apollo 11 prime crew (Astronauts Edwin E. Aldrin Jr., lunar module pilot; Neil A. Armstrong, commander; and Michael Collins, command module pilot) on the deck of the NASA MV Retriever prior to water egress training with Apollo Command Module Boilerplate 1102A in the Gulf of Mexico on 24 May 1969 (Photo Credit: NASA S-69-34882).



7. The Apollo 11 prime crew (Astronauts Edwin E. Aldrin Jr., lunar module pilot; Neil A. Armstrong, commander; and Michael Collins, command module pilot) and biological decontamination UDT Lt. Clancy Hatleberg participate in water egress training with Apollo Command Module Boilerplate 1102A in the Gulf of Mexico from the NASA MV Retriever on 24 May 1969 (Photo Credit: NASA S-69-34885).