

**NATIONAL REGISTER ELIGIBILITY ASSESSMENT
VESSEL: USNS *Mount Washington* (T-AOG 5076)**



USNS *Mount Washington* at Fort Eustis, Virginia, circa 1995. Maritime Administration photo.

Vessel History

The commercial tanker *Mount Washington Victory* was laid down on January 14, 1963 at Bethlehem Steel Company's shipyard in Quincy, Massachusetts and launched on September 20, 1963. The U.S. Military Sea Transportation Service (MSTS)¹ chartered the ship from the Mount Washington Tanker Company, a subsidiary of Victory Carriers of New York, the American flag operation of Greek shipping magnate Aristotle Onassis. MSTS later acquired the ship and assigned it the designation T-AOG 5076 and dropped Victory from its name. *Mount Washington* and its MSTS fleet-mate the *Mount Vernon* belonged to a group of "standard" tankers whose prototype had been the Niarchos²-owned *World Glory* of 1954. By the time *Mount Washington* was launched, 20 of these vessels had been built or under were construction. It was the twelfth tanker of this type built in the Quincy shipyard.

¹ MSTS was a post-World War II combination of four predecessor government agencies that handled similar sealift functions. These included the Navy's Naval Transportation Service and Fleet Support Service, the Army Transport Service, and the War Shipping Administration of the United States Maritime Commission. In 1970, MSTS was renamed the Military Sealift Command.

² Stavros Niarchos (1909-1996) was a Greek shipping magnate. In 1954, *World Glory* was the largest cargo vessel ever built in the U.S., and the largest tanker in the world.

Mount Washington was one of the American flag vessels owned by Onassis that transported fuel to Southeast Asia to supply U.S. Forces in Vietnam. In peacetime, the ship transported petroleum products from refineries in the Gulf of Mexico and in the Caribbean. Tankers were also commonly employed in the carriage of bulk cargoes, such as grain. In 1965, *Mount Washington* transported 40,000 tons of surplus grain during the American response to grain shortages in India and Pakistan. In the 1970s, *Mount Washington* transported surplus grain to the former Soviet Union, under the terms of a transfer agreement that expired at the end of 1981.

Maritime Administration

The Navy transferred *Mount Washington* to the Maritime Administration's (MARAD) Ready Reserve Force (RRF) in 1988. On October 3 of that year, the ship arrived in Orange, Texas, and shortly thereafter was placed in Houston on a five-day activation status. In 1993, the vessel was selected for conversion to support the Offshore Petroleum Discharge System (OPDS). In July, MARAD entered into a \$10 million contract with the Marine Hydraulics shipyard in Norfolk, Virginia to overhaul the vessel and fit it with the OPDS. The OPDS was developed in the mid-1980s to deliver fuel directly from a tanker to shore to support amphibious operations when port facilities were poor or unavailable. Work on *Mount Washington* was completed in early 1995 and the system was fully tested during the annual J-LOTS (Joint Logistics over the Shore) exercise off Fort Story, Virginia that year. The ship returned to Ready Reserve status in Houston.

In March 1998 *Mount Washington* was drydocked in Tampa, Florida. In November 2001 the ship moved to Detyens Shipyard in Charleston, South Carolina, where a crane was installed aft of the bridge deckhouse to assist in OPDS operations. It remained in Charleston until March 2002 before sailing to Camp Pendleton, California to unload equipment; from there the ship continued north to San Francisco. This positioning voyage reflected the vessel's transfer to the West Coast; a move that supported a Defense Department requirement to have an OPDS capability in the Pacific. *Mount Washington* participated in the March 2004 J-LOTS exercise at San Francisco. In June 2005 it was moved to the Reserve Fleet anchorage in Suisun Bay, California. The ship was downgraded from retention to non-retention status on October 30, 2007.

OPDS-Offshore Petroleum Discharge System³

The OPDS is designed to transfer petroleum products directly from an offshore tanker to support military operations on shore. A pipeline is run to the beach from a mooring buoy where tankers can attach and pump fuel to onshore storage facilities. The OPDS is particularly effective at locations where fuel piers are unavailable, and tankers are unable to tie up ashore to

³ Please refer to Appendix 1 for illustrations of the OPDS.

off-load fuel. The OPDS can pump up to 1.7 million gallons of fuel per day. The OPDS was developed in the early 1980s using existing technology and was based on earlier systems. It was a U.S. government system deployed by military personnel from a government-owned contractor operated tanker.

Major components of the system include the OPDS tanker with booster pumps and spread mooring winches; a recoverable single anchor leg mooring (SALM) to accommodate tankers of up to 70,000 deadweight tons; ship to SALM hose lines; up to four miles of six-inch (internal diameter) conduit for pumping to the beach; and two Beach Termination Units (BTUs)⁴ to interface with the shore side systems. OPDS can support a two line system for multi-product discharge, but ship standoff distance is reduced from four to two miles. To begin the process, a support ship and a tender work together to install up to eight miles of eight-inch-diameter flexible pipe. Next, the support ship positions the tanker for safe off-load operations. While the tender holds the tanker in place, the tanker's lines connect to the flexible pipe through the support ship. Booster pumps aboard the support ship increase the pressure of fuel, pushing the fuel to shore.

The OPDS is the successor to Operation *Pluto* (Pipeline under the Ocean), a World War II invention where underwater pipelines were laid between England and France to supply fuel to the Allied forces in Europe. Pipelines were considered necessary to relieve dependence on oil tankers, which could be slowed by bad weather, were susceptible to German submarine attacks, and were also needed in the Pacific War.

In addition to *Mount Washington*, MARAD currently has two OPDS tankers in its inventory. These include the RRF ship *Petersburg* located in Alameda, California, and the inactive NDRF vessel *Potomac* in Beaumont, Texas. The Navy is currently working on the next generation of OPDS tankers to replace the aging vessels.

Historic Context

Immediately following WWII, the demand for petroleum products rose rapidly, which led to a rapid succession of new tanker designs that increased their capacity from 16,000 deadweight tons (dwt) during WWII to nearly 100,000 dwt by 1960, and to over 300,000 dwt by 1970. The following provides a summary of the history of U.S. tanker development from WWII to 1960, within which the historic significance of the *Mount Washington* can be evaluated.

The era of the "super-size" tankers, as they were first called, began in 1947 with the *Ulysses*, a 27,928 dwt tanker built by Welding Shipyards of Norfolk, Virginia. *Ulysses* was the largest tanker in world, approaching twice the size of its predecessors. The ship's construction marks the beginning of an industry trend to build increasingly larger tankers—tankers that would ultimately directly shape the future business and politics of oil. Welding Shipyards signed a

⁴ A Beach Termination Unit (BTU) is a metal enclosure containing a skid base, piping, valves, gauges, pig trap and associated fittings. The BTU acts as an anchor for the OPDS conduit on the beach at the high water mark. It passes product from the tanker to the onshore distribution system at a regulated discharge pressure. (See diagram in Appendix 2).

contract with National Bulk Carriers to build ten identical tankers of even larger capacity and in 1948 launched the first of the fleet, the 30,000 dwt tanker *Bulkpetrol*, which established another world record.

By 1949, the major commercial shipyards were all rapidly building "supertankers" in the 27,000-28,000 dwt class, including Bethlehem Steel Company, at their Quincy, Massachusetts, and Sparrows Point, Maryland, yards, at Newport News Shipbuilding in Virginia, and at Sun Shipbuilding in Chester, Pennsylvania. Twenty-nine supertankers were launched in 1949, establishing a new peacetime record of total deadweight tonnage for self-propelled commercial vessels ships built by U.S. shipyards. The Bethlehem-Quincy yard produced five 28,000 dwt tankers in 1949 and five more in 1950. New York Shipbuilding Corporation in Camden, New Jersey, entered the market in 1950 with the 30,155 dwt *Atlantic Seaman*, a new world record by a small margin. The *Atlantic Seaman* was 627' long, 85' wide, and 45' in depth with 18,000 horsepower.

In 1952, Bethlehem-Quincy built the *Waneta*, a 29,250 dwt tanker with a length of 615', a width of 84' and a depth of 44'. The next year the horsepower was upped from 13,000 to 15,000, and the design became a standard for at least 20 more vessels over the next eight years that would be produced by the company's yards or by Sun Shipbuilding. The design provided for deadweight capacities in the range of 28,000 to 31,000 tons.

The next major leap in tanker technology came in 1954 when the Greek shipping magnate Stavros S. Niarchos took delivery of several huge new 45,000 dwt tankers from various yards around the world, one being the Bethlehem-Quincy yard, which built the *World Glory*. With a length of 737' and a deadweight tonnage of 45,000 tons, *World Glory* was the largest tanker in the world and the second largest merchant ship ever built in the U.S. after the passenger liner *United States*.

Also notable in 1954 was the construction of four 39,000 dwt tankers of the *W. Alton Jones* class by Newport News Shipyard that incorporated important new features and advancements in tanker technology. In 1956 the advanced features of the *W. Alton Jones* were incorporated into the Cities Service tanker *Baltimore*, the first tanker built under the Maritime Administration's "trade-in-and-build" program. Cities Service replaced seven WWII vintage T-2 tankers with three *Baltimore*-class tankers.

By the mid-1950s, Japan had become established as a major shipbuilder competing in the world tanker construction market. In 1956 the *Universe Leader* was built in Japan's Kure Shipyard, establishing the new tanker size record with a length of 854', a beam of 125', and a deadweight capacity of 85,515 tons. In the U.S. the demand remained strong for tankers in the 30,000 and 45,000 dwt classes, the former now the U.S. coastwise workhorse, and the latter the "fleetbuilder" of choice for the expanding Greek and new South American shipping companies. In 1957 and 1958 the Bethlehem-Quincy yard built three sister ships of its standard 30,000 dwt

design for use by Socony Mobil Oil Company, and three tankers of its 46,000 dwt design, one for Niarchos and two for Venezuelan interests.

In 1959 the demand for American-built tankers reached its highest level to date, with 26 tankers completed with an aggregate deadweight tonnage of over 1,000,000 tons. Tankers of the 45,000 dwt class formed the largest group, but the need for 30,000 dwt tankers remained with seven delivered. The largest tanker built by an American yard to date, the 860', 71,282 dwt *Princess Sophie* was completed in 1959 by Bethlehem-Quincy for the Niarchos-owned shipping company, World Brilliance Corporation. By 1960 the market for 30,000 dwt tankers began to wane although certain domestic carriers, including Gulf Oil, continued to purchase them for serving ports and loading/unloading facilities that could not handle the larger ships. American shipyards were now regularly producing "standard design" tankers in the 45,000 dwt and 66,000 dwt classes, but the demand for bigger ships continued. In 1962 Bethlehem-Quincy delivered the *Manhattan*, which at 106,568 dwt, redefined the meaning of "supertanker," a term coined 10 years earlier for 30,000 dwt tankers. With a length of 940' and a draft of 50', the *Manhattan* was the largest U.S. merchant ship ever built.

Description/Characteristics of Vessel Type

Ship: *Mount Washington*
Type: Tanker/Liquid
Official Number: 293097
Builder: Bethlehem Steel Company shipyard in Quincy, Massachusetts
Year: 1963
Length: 736'
Beam: 102'
Gross Tonnage (GRT): 27797
Draft: 40'
Depth: 50'
Speed: 17.5 knots

Mount Washington was the last merchant vessel built at the Quincy yard under Bethlehem Steel's ownership. It measured 736 feet in length, 102 feet in breadth, with a depth of hold of 50 feet. Its maximum draft was 40 feet. The ship had the profile that had been popular for tankers since the early twentieth century. Its superstructure was divided, with a multi storey deckhouse forward of amidships housing the navigating bridge and some crew quarters, and a second deckhouse at the stern housing the upper machinery spaces and the remaining crew quarters. It was a single-screw vessel powered by compound steam turbines rated at 21,500 shp. Its service speed was 17.5 knots. It had a cargo capacity of 364,000 barrels. The four steam turbine driven centrifugal pumps each with a capacity of 3,850 gallons per minute could handle four different petroleum products simultaneously. Its normal crew was 38.

Statement of Significance

Mount Washington is associated with shipping magnate Aristotle Onassis, whose shipping company owned the vessel. It has limited association with both the Vietnam War and with the transport of surplus grain to India, Pakistan and the former Soviet Union. It was one of five vessels fitted with the OPDS.

Integrity of Characteristics/Features

The vessel was originally constructed in 1963. In 1995, *Mount Washington* was overhauled and fitted with an Offshore Petroleum Discharge System. The vessel was in service until 2003 and did not undergo any substantial modifications during its service life. The vessel is in good condition with very moderate topside deterioration.

National Register Eligibility Statement

The *Mount Washington* is a typical product tanker with no distinctive or unusual characteristics and is generally representative of its contemporary type. The vessel is not distinctive, nor is it of a specialized form unique to a particular trade. It is associated with Aristotle Onassis, however, *Mount Washington* was just one of many merchant vessels owned by Onassis. It has limited association with both the Vietnam War and in transporting grain to India, Pakistan and the former Soviet Union when those countries were experiencing grain shortages. Its role was not significant enough to qualify under criteria A considering the vessel's age and the recent nature of these events.

Determination: NOT ELIGIBLE

Date: 27 October 2011

Sources

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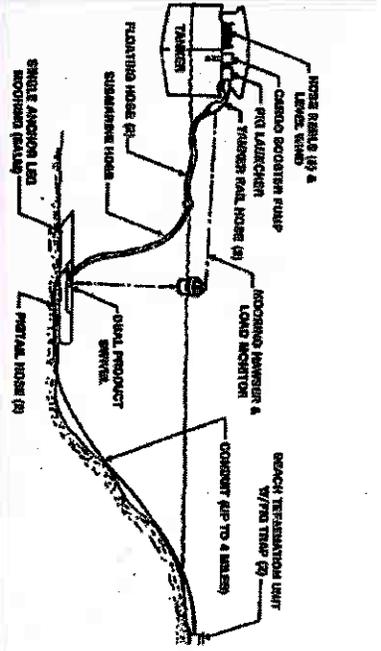
Maritime Administration's Property Management and Archive Record System:
www.pmars.imsug.com/detail.asp?Ship=3520

Offshore Petroleum Discharge System*



Clockwise from top left: (1) Row of hose fittings; (2) Single Anchor Leg Mooring (SALM); (3) Hose fittings; (4) Conduit reels; (5) SALM. The submersible barge carried by the host tanker, deployed and used as a mooring and fuel node by the OPDS; (6) Conduit reel; (7) OPDS tanker *Petersburg* in Honolulu, date unknown; (8) OPDS tanker *American Osprey* (date and location are unknown).

***All photographs (except number seven) are of the OPDS tanker *American Osprey*, which illustrates the OPDS and how it looked onboard *Mount Washington*.**



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From a presentation by Griff Hume on 29 September 2004.