NATIONAL REGISTER ELIGIBILITY ASSESSMENT

VESSEL: SS Equality State



Aerial view of Equality State underway showing its heavy-lift cranes mounted in pairs on the Main Deck. Maritime Administration photograph.

Vessel History

SS Equality State is an auxiliary crane ship owned by the U.S. government. Originally built as a break-bulk cargo ship for subsidized commercial liner service in 1960–61, the ship was lengthened and converted into a container ship in 1971. The Maritime Administration (MARAD) purchased the vessel in 1987 and converted it into an auxiliary crane ship for use in MARAD's Ready Reserve Force (RRF), which consists of a fleet of militarily useful vessels kept in reserve by MARAD and operated by the U.S. Navy's Military Sealift Command (MSC) during times of national emergency. Maintained under contract for MARAD and manned by civilian crews during periods of activation for MSC, the ship provided sealift support during Operations Desert Shield/Desert Storm/Desert Sortie in 1990–92 and assisted in the port of New Orleans in the aftermath of Hurricane Katrina in 2005. Equality State provided temporary berthing for port officials, oil spill clean-up crews, and other emergency personnel. The ship is currently moored at MARAD's Beaumont Reserve Fleet in Beaumont, Texas, where it is retained for parts for other RRF vessels.

Equality State was constructed in 1960–61 as the break-bulk cargo liner Washington Mail. Built for the American Mail Line, Ltd., the ship was the first unit in a flight of three identical ships designed to transport general cargo in subsidized liner service between ports in the U.S. Pacific Northwest and the Far East. Like the fleets of all of the subsided liner companies then operating under the American flag, American Mail's fleet was reaching statutory obsolescence by the late 1950s and the company had embarked on a substantial construction program. Washington Mail's sister ships included Japan Mail (now Diamond State) and Philippine Mail (later American Banker, now scrapped), both completed in 1962. American Mail Line ordered two additional ships of substantially similar design, Oregon Mail and Canada Mail, in December 1962; they were completed in 1964 and 1965 respectively.¹ Oregon Mail was similarly lengthened and converted in 1972; in 1987 it was sold to a private company and converted into an offshore fish processing vessel. Named Ocean Phoenix, the vessel is still in service at the time of writing. Canada Mail was not converted into a containership; instead it was acquired by MARAD in 1974 and converted into an Oceanographic Research Vessel for the U.S. Navy. Renamed H.H. Hess, the vessel served until 1993 and has since been scrapped.

Washington Mail and its sisters were designed by the J. J. Henry Company of New York and Philadelphia. This firm also supervised the vessels' construction at the Los Angeles Division of the Todd Shipyards Corporation in San Pedro, California. The design, designated C4-S-1s by MARAD, was an adaptation of the Mariner cargo ship design (C4-S-1a) developed in the early 1950s. It employed the same overall dimensions and horsepower as the Mariner but was modified to suit the requirements of American Mail Line's Pacific cargo service. These modifications included an extended forecastle deck with flaring bulwarks to deflect water in higher sea states and bipod cargo masts in place of kingposts. A. Baker Barnhart Associates of New York designed the interiors of the accommodation spaces.²

The construction contract for the vessel and its sisters was awarded August 5, 1959. The keel of *Washington Mail* was laid July 6, 1960. The vessel was launched May 11, 1961, and delivered January 2, 1962. It was sponsored at its launch by Anne Lintner, wife of retired AML president Albert R. Lintner. ³

Washington Mail was built under a federal construction-differential subsidy administered by MARAD. Todd Shipyards bid \$11,925,055 each to build the ship and its sisters. Government-stipulated national-defense features, such as additional reserve horsepower, added \$80,539 to the price of each ship, for a total contract price of \$12,005,594 each or \$36,016,782 total. MARAD calculated that the cost of these vessels if built in a foreign shipyard would be \$18,450,000, for

¹ "AML's Washington Mail," *Marine Engineering / Log* (March 1962), 61–72; "SS Oregon Mail: High-Speed Cargo liner Joins American Mail Line's Far East Service," *Marine Engineering / Log* (March 1963), 50–57, 119, 121; Frank A. Gerhardt, "The Maritime Administration Shipbuilding Program from 1950 to 1984," chart reproducing contract data found in the Records of the Maritime Administration (RG 357), National Archives and Records Administration,

http://appendix.usmaritimecommission.de/documents/documents_main.htm.

² "AML's Washington Mail," 61, 63.

³ Gerhardt, "Maritime Administration Shipbuilding Program"; "SS Washington Mail launched for AML," *Marine Digest*, May 13, 1961, 1, 12.

an anticipated subsidy of 50.7 percent.⁴ Changes made during construction led to somewhat higher final costs, however. MARAD purchased the three vessels from Todd Shipyards for a final cost of about \$39.1 million and sold them to American Mail Line for \$19.3 million, for a subsidy of 50.6 percent. American Mail Line traded in three old vessels from its fleet to MARAD for an allowance of \$2.349 million against the purchase of the new ships. The line leased the old freighters back until the new vessels were ready.⁵

Washington Mail was registered in Seattle and entered service in 1962 carrying general breakbulk cargo, dry and liquid bulk cargo, containers, and some refrigerated cargo in subsidized liner service on the Pacific Ocean. Prior to its maiden voyage, the ship was twice opened to the public, first in Portland on January 8 and again in Seattle on January 19. "Visitors will tour the bridge and passenger lounge and dining rooms, and will see the passenger staterooms, modern cargo gear and hydraulically operated hatch covers," the *Oregonian* newspaper reported. The ship, under the command of Capt. Austin R. Wentworth of Portland, loaded its first cargo at Portland; then loaded additional cargo at Longview; Vancouver, British Columbia; Tacoma; and Seattle before crossing the Pacific for maiden calls in Japan, Korea, Taiwan, the Philippines, and Hong Kong.⁶

The ship broke transpacific speed records on its first three roundtrips. In March 1962, on the return leg of its maiden voyage, it covered the 4,200 miles between Yokohama and Race Rocks, British Columbia, in 7 days, 19 hours, 54 minutes, at an average speed of 22.75 knots. This was 22 minutes faster than the previous passenger-ship record on this route, set in 1931, and 29 hours, 31 minutes faster than the previous cargo ship record, set in 1954. In June, on the return leg of its second voyage, the ship covered the distance 21 minutes faster; in August, it did it more than 7 hours faster, in 7 days, 12 hours, 38 minutes, at an average speed of 23.46 knots. ⁷

By mid-1962, with *Japan Mail* in service as well, *Washington Mail* was one of nine vessels operated by American Mail Line. The ship was initially a profit maker for its owners. During 1963, *Washington Mail* and its two sister ships made 15 voyages and generated \$7.985 million in revenue for American Mail Line, which was 90 percent owned by American President Lines, Ltd. The same number of roundtrips generated \$8.5 million in 1964. ⁸

⁴ Frank A. Gerhardt, "Title V New Construction Contracts, for period beginning July 1st 1957," chart reproducing financial data found in the Records of the Maritime Administration (RG 357), National Archives and Records Administration, http://appendix.usmaritimecommission.de/documents/documents_main.htm. The professional press reported a lower vessel cost of \$11,350,000; see "U.S. Shipyard Production during 1962," *Marine Engineering / Log* (February 1963), 55.

⁵ Annual Report of the Federal Maritime Board and Maritime Administration 1960, 4; Annual Report of the Federal Maritime Board and Maritime Administration 1961, 52.

⁶ "American Mail Line to show vessel at Portland Terminal No. 1 Monday," *Oregonian*, January 6, 1962; "\$13,000,000 ship to hold open house," *Seattle Times*, January 7, 1962.

⁷ "New freighter sets two Pacific records," *New York Times*, March 18, 1962; "New cargo liner sets record on run from Japan to Canada," *New York Times*, August 21, 1962, 65.

⁸ Annual Report of the Maritime Administration 1962, 45; House Committee on the Judiciary, The Ocean Freight Industry, H. Rpt. 1419, 87th Cong. 2d. sess., March 12, 1962., 47; "Pacific Marine," Marine Engineering / Log (June 15, 1965), 42G.

Little of note has been found about the ship's first years in service. On April 26, 1966, *Washington Mail* collided with the States Steamship Company freighter *Ohio* off South Korea, but damage to both ships was minor.⁹

The industry-wide shift to intermodal, containerized freight handling during the late 1960s quickly made this ship obsolete and uneconomical to operate. As a result, in 1971, American Mail Line had the vessel lengthened and converted into a cellular (fixed-guides) containership. The ship was cut in two at Bethlehem Steel's San Francisco yard and added a new 105'-6" midbody. The yard also added sponsons to either side of the main deck at the stern and immediately abaft the raised foredeck to give the Main Deck a rectangular shape for container stowage. The ship's bipod cargo masts were removed, two decks were added atop the midships deckhouse to raise the wheelhouse, and an 800-hp bow thruster was installed. The jumboized vessel was designated by MARAD as design C6-S-1x. The conversion, completed in September 1971, increased the ship's container capacity from 211 TEUs to 892 TEUs.¹⁰

On October 9, 1974, *Washington Mail* rescued the crew of the 54' junk *Tai Ki* 1,500 miles southwest of Kodiak, Alaska. The junk, a replica of an ancient Chinese vessel, had sailed from Hong Kong the previous June on a quasi-anthropological adventure but Teredo worm damage weakened it and it was damaged in heavy seas. The crew of the freighter removed all seven men from the wooden vessel by lifeboat in 20' seas and 40-knot winds and carried them to Spokane, Washington.¹¹

American Mail Line transferred the ship's title to American President Lines October 1, 1973. The ship's name was changed to *President Roosevelt* in November 1975 when AML was consolidated into APL, although it continued to be operated under the AML flag until 1978. The ship was traded in to MARAD on December 30, 1982, and chartered back to APL, but this trade-in was cancelled in 1983, and APL sold the ship to Delta Steamship Lines, Inc., on August 30, 1983. The new owners renamed the ship *Santa Rosa*.¹²

The ship was sold again in early 1985 when all Delta Line assets were acquired by United States Lines and the ship was renamed *American Builder*. A photograph of the ship in service under this name shows a gantry crane added to the Main Deck forward of the deckhouse to facilitate container handling in ports lacking container cranes. The date this crane was fitted is unknown.

MARAD acquired *American Builder* on March 10, 1987, as a candidate for conversion to an auxiliary crane ship for use by MSC. After a brief lay up at MARAD's James River Reserve Fleet, the ship was taken to Tampa Shipbuilding Company and altered between January 1988 and February 1989. According to a navy press release, the work turned the vessel into "a mobile discharge facility for non-self-sustaining container ships in ports without operational

⁹ "U.S. freighters are in collision," *Washington Post*, April 27, 1966, A23.

¹⁰ "Around the Shipyards," *Marine Engineering / Log* (October 1971), 78. American President Lines' corporate history gives the converted ship's TEU capacity as 1,108; APL, "History—1952–69 Vessel Statistics," http://aplinfo.apl.com/history/timeline/stat8.htm#pro2.

¹¹ Michael T. Kaufman, "Junk's crew safe in Pacific rescue," New York Times, October 10, 1974, 10.

¹² Vessel status cards for *Washington Mail*, MARAD Vessel History Database, http://www.marad.dot.gov/sh/ShipHistory/Detail/11532; APL, "History—1952–69 Vessel Statistics."

container discharge capability." Three pedestal cranes with twin booms were added on the Main Deck, which were designed to lift containers, vehicles, and other cargo from the ship to a pier, from the ship to a lighter, or from other ships to adjacent piers or lighters. The ship's maximum lift capacity after conversion, using four cranes working together, was 90-tons. Other aspects of the conversion included installing fixed concrete ballast blocks within certain container cells, and installation of an industrial grade diesel generating plant just aft of the machinery space in what was originally cargo hold 7 to provide dedicated electrical power to operate the cranes. The ballast blocks were installed on the port side to counteract the offset weight of the cranes on the starboard side. Post conversion, the ship could still function as a containership, but with reduced capacity due to lost space due to the cranes, ballast and diesel generators.

Renamed *Equality State*, the ship entered the RRF on May 24, 1989, with a five-day readiness status. Initially outported to Tampa, Florida, the ship moved to New Orleans, Louisiana, on November 2, 1989. ¹⁴

At the time of Operation *Desert Shield* in August 1990, the RRF included 96 ships, 68 percent of which were in a five-day readiness status, including *Equality State*. Between the beginning of the operation and late February 1991, the U.S. government shipped about 3.3 million short tons of dry cargo to the Persian Gulf to support military operations there. About 85 percent of this was carried by sea. Of about 344 vessels that participated in the sealift, *Equality State* was one of 79 RRF vessels activated for service. MSC ordered the ship to be activated on August 19, 1990 and it came under MSC control on August 31, longer than the vessel's nominal five-day activation period. This delay was caused by machinery problems and what a MARAD report characterizes as "the late arrival and low quality of the engineering officers." Many of the RRF activations during Operations *Desert Shield/ Desert Storm* took longer than their specified times. Only 15 ships activated on time, and 37 activated more than five days late. Most of the delays were caused by mechanical failures.¹⁵

Equality State arrived at the port of Bayonne, New Jersey, on September 9 to load cargo and departed September 12 for the Saudi Arabian port of Ad Dammam. On September 17, leaks developed in the port boiler tubes, and the ship diverted to Cadiz, Spain, for repairs. Thirty-nine tubes needed to be replaced, and delay in receiving the necessary parts led to the ship's cargo being transferred to Cape Douglas between October 4 and 9. Repairs to Equality State were completed October 9, but the ship remained at Cadiz until November 14 awaiting orders and conducting crew training. It then sailed for Rotterdam to load cargo, arriving November 17.

⁻

¹³ Vessel status cards for *Equality State*, MARAD Vessel History Database, http://www.marad.dot.gov/sh/ShipHistory/Detail/1464; APL, "History—1952–69 Vessel Statistics"; Norman Polmar, *Naval Institute Guide to the Ships and Aircraft of the U.S. Fleet*, 18th ed. (Annapolis, Md.: Naval Institute Press, 2005), 308; "Navy Christens ACS at Tamps Shipyards," *Maritime Reporter* (June 1989), 11.

¹⁴ Vessel status cards for *Equality State*.

¹⁵ "RRF Activation Summary (Desert Shield / Desert Storm)," Maritime Administration files, Washington, D.C.; Ronald F. Rost, John F. Addams, and John J. Nelson, *Sealift in Operation Desert Shield / Desert Storm: 7 August 1990 to 17 February 1991*, Report CRM 91-109 (Alexandria, Va.: Center for Naval Analyses, May 1991), 1–5, 11, B3. Seventy RRF vessels were activated for these operations, but two addition RRF vessels, activated for another mission, also made Desert Shield cargo deliveries.

Here the ship was again delayed by repairs when the port anchor windlass vane pump failed and the port anchor was lost. The ship finally sailed on December 5 with cargo for the 2nd Corps Support Command, arriving at Ad Dammam on December 20. ¹⁶

The ship arrived back in the U.S. with cargo on May 2, 1991. It loaded additional cargo for overseas at Norfolk, Virginia, and sailed May 11. Three days out, a leak developed in the stern tube and the ship returned to Norfolk for drydocking and repair. The ship finally sailed on May 29 and during the next year took part in Operation *Desert Sortie*, the redeployment of military assets to their home bases after the war. It was deactivated between September 1992 and January 1993 at Bender Shipbuilding, Mobile, Alabama.¹⁷

After a period in the Beaumont Reserve Fleet, *Equality State* was outported to Houston, Texas, in July 1997. It took part in a Joint Logistics Over the Shore (JLOTS) exercise at Roosevelt Roads, Puerto Rico, in late July 1999. The exercise, part of Exercise Blue Advance 99, involved loading 115 army heavy trucks and Humvees from shore onto the ship and then landing them. Aside from this exercise, the ship otherwise took part in periodic turbo activations during this period to test its readiness for service. Beginning in spring 2000 the ship was managed for MARAD by Pacific Gulf Marine, Inc. It was downgraded to 20-day activation status in September 2004 and moved to the Beaumont Reserve Fleet.¹⁸

On September 4, 2005, the ship was activated for use in the relief of New Orleans after Hurricane Katrina, one of eight RRF vessels whose presence helped get the port functioning again only two weeks after the storm. The ship was stationed at Port Sulphur, Louisiana, from September 17 until about October 17. The ship was deactivated at Orange, Texas, before returning to the Beaumont Reserve Fleet on December 13.19

The vessel's retention status was downgraded from militarily useful to logistics support on October 1, 2009. In this status the ship is reserved for materials stripping to support the maintenance of other vessels in the National Defense Reserve Fleet (NDRF). ²⁰

¹⁷ Koehler, "RRF Operation Desert Shield / Desert Storm readiness notes"; "RRF Activation Summery (Desert Shield / Desert Storm)"; MARAD Division of Ship Maintenance and Repair, Office of Ship Operations, *Readiness Assessment of the RRF*, August 28, 1992, Maritime Administration files.

¹⁶ Erhard Koehler, "RRF Operation Desert Shield / Desert Storm readiness notes," Maritime Administration files; Rost, *Sealift in Operation Desert Shield*, B-8.

¹⁸ "Equality State Milestones," MARAD Vessel History Database, http://www.marad.dot.gov/sh/ShipHistory/Detail/1464; "Blue Advance," http://www.globalsecurity.org/military/ops/blue-advance.htm; Maritime Administration Annual Report to Congress Fiscal Year 1999, 6; "Ready Reserve Force (RRF) Ship Manager," http://www.globalsecurity.org/military/agency/dot/rrf-sm.htm.

¹⁹ Maritime Administration Annual Report to Congress Fiscal Year 2005, 10; "Maritime Administration," Seapower 2006 Almanac (January 2006); "Equality State Milestones."

²⁰ "Equality State Milestones"; MARAD, "National Defense Reserve Fleet Inventory for the month ending May 31, 2006" and "National Defense Reserve Fleet Inventory for the month ending October 31, 2009," both http://www.marad.dot.gov/ships_shipping_landing_page/national_security/ship_operations/national_defense_reserve_fleet/NDRF_Inventory_Archive.htm.

Description/Characteristics of Vessel Type

Vessel Name: Equality State

Former Names: Washington Mail (1961-75)

President Roosevelt (1975-83) Santa Rosa (1983 - 85)(1985 - 87)American Builder

Dates of Construction: Contract signed August 5, 1959

Keel laid July 6, 1960 Launched May 11, 1961 Delivered January 2, 1962

Designer: J. J. Henry Company, Inc., New York, N.Y.

Builder: Todd Shipyards Corporation,

> Los Angeles Division, San Pedro, Calif. Crane ship (originally break-bulk cargo ship)

Type of Craft: MARAD Design No.: C6-S-MA1xb (originally C4-S-1s; then C6-S-1x)

MARAD Hull No.: MA-86 **Builder's Hull No.:** 77 Official No.: 287238 IMO No.: 5386605 **Navy Designation:** T-ACS 8

Propulsion: Geared Steam Turbine **Original Owner:** American Mail Line, Ltd.

Disposition: Laid up in Beaumont Reserve Fleet

Principal Measurements Original Current C6-S-MA1xb **Design Classification** C4-S-1s Length (bp): 528'-0" 633'-0" 563'-8" Length (oa): 667'-11" Beam (molded): 76'-0" 76'-0" Depth (molded): 44'-6" 44'-8" Draft (summer): 33'-4" 31'-7"

Displacement (full load): 22,595 long tons 31,498 long tons Deadweight: 14,797 long tons 19,871 long tons

Gross registered tonnage: 12.714 16.518 Net registered tonnage: 7,620 9,986

Dry cargo capacity: 748.568 cubic feet Refrigerated cargo capacity: 17,905 cubic feet Liquid cargo capacity: 2,387 long tons

National Defense rating horsepower: 22,000 n/a

Maximum continuous

shaft horsepower: 22,000 19,250

Normal shaft horsepower: 17,500 Service speed: 20 knots 15,000 miles ²¹ Cruising radius (at 20 knots):

Equality State has a welded steel hull with riveting in selected gunwale, deck, side, and bottom seams. It has a semi-raked stem, cruiser stern, and long forecastle with flaring bulwarks. It is transversely framed and subdivided by nine watertight bulkheads into six holds, fore and aft peaks, and the machinery compartment. A double bottom runs from the forepeak to the aft

²¹ Figures from Lloyd's Register of Shipping (1965–66 and 1995–96); American Bureau of Shipping Record (1963 and 1990); and "AML's Washington Mail," Marine Engineering / Log (March 1962), 62. It should be noted that draft, displacement, and tonnages are subject to alteration over time as well as variations in measurement.

peak bulkheads. There are two decks in the hull, constructed almost entirely without sheer and camber, plus a third deck forward and aft.²²

The ship has a single amidships deck house containing the navigation spaces and crew accommodations. Uppermost is the Bridge Deck containing the wheelhouse, chart room, radio room, gyro room, bonded storeroom, fan room, sea cabin, and staterooms for three mates and a radio operator. The Boat Deck contains the captain's stateroom and office, another officer's stateroom, and five double and two single staterooms with attached lavatory and shower spaces that originally served as passenger accommodations. This deck also includes the original passenger lounge and the emergency generator room. Upper Deck contains the officers' dining saloon (originally the passenger dining saloon as well), plus the hospital, the purser's office, and single staterooms with en suite toilets and showers for officers. The Main Deck has double staterooms for crew, the crew lounge, and the crew laundry. Adjacent staterooms on this level share shower and toilet compartments. The crew's mess, the galley, and food storage spaces are located on the Second Deck amidships. All staterooms and public spaces are air conditioned.

The machinery compartment is located amidships. Two oil-fired Combustion Engineering boilers provide steam to two impulse-type General Electric steam turbines double-reduction geared to a single shaft. An astern element is fitted into the low-pressure turbine. The maximum continuous output of the propulsion plant when the ship first entered service was 19,250 shp at 105 rpm, with a normal output of 17,500 shp at 102 rpm for a service speed of 20 knots. The ship's reserve horsepower for national defense purposes was 22,000 shp, but this power is no longer reserved only for emergency use. ²³

The main throttle console was reported in the professional press when the ship was new to be of similar design to the type then common on American Great Lakes bulk carriers. It was probably the first console of its style installed on an American general cargo ship.²⁴

Electrical supply is provided by two General Electric 700-kW turbogenerators. Emergency supply comes from a 100-kW emergency generator powered by a General Motors four-cylinder diesel engine. Two Griscom-Russell low-pressure distilling plants provide up to 20,000 gallons of fresh water per day. The steering gear, by Western Gear Corporation, is electrohydraulic with a single-cylinder and a rapson slide.

The ship has nine cargo holds. These are served by six cargo cranes, mounted in pairs atop three pedestals on the Main Deck, two forward of the deckhouse and one aft.

Two 74-person motor lifeboats are carried in addition to five inflatable rafts with a total capacity of 154 persons.

8

²² All details of the ship's construction are from *American Bureau of Shipping Record*, 1963, 1380; "AML's Washington Mail," *Marine Engineering / Log* (March 1962), 61–72; and "Distinctive Ships: AML Cargoliner 'Washington Mail," *Marine Engineering / Log* (December 1962), 80–81, 93–94.

²³ A photo of one of the boilers being lifted into the hull during construction appeared in a Combustion Engineering advertisement in the August 1961 issue of *Marine Engineering / Log*.

²⁴ "AML's Washington Mail," 69.

Statement of Significance

The activation of *Equality State* during the build-up for Operations *Desert Shield/Desert Storm* was the RRF's first large-scale activation since its creation in 1976. *Equality State* delivered cargoes of military supplies and ammunition without incident and provided desperately needed services in a time of national need. Subsequent crises involving MARAD's role of assisting the military during national emergencies have generally utilized more efficient ship types more in keeping with modern logistics operations. *Equality State* also provided humanitarian aid to New Orleans in the aftermath of Hurricane Katrina.

Historical Integrity

The overall condition of *Equality State* is good; it has experienced only normal wear and aging for a vessel of its age. The hull, machinery, passenger and crew accommodations are largely intact. The ship was modified several times during its career, first as a break-bulk cargo ship, a containership and finally an auxiliary crane ship. In 1993 it was altered again when it was designed to carry the Modular Cargo Delivery System (MCDS). Additionally, a raised deck was added to the stern for the staging of cargo for vertical replenishment (VERTREP). The vessel no longer holds any historical integrity from its original construction as a break-bulk cargo ship.

National Register Eligibility Statement

Equality State does not possess enough historical significance in any category necessary to be eligible for listing on the National Register of Historic Places. While it did participate in Operations Desert Shield/Desert Storm it was one of 79 RRF vessels activated by the U.S. Navy to support those operations and its role was not significant enough to qualify under Criteria A, particularly considering the recent nature of those operations.

Date: 12 December 2014

Determination: NOT ELIGIBLE

Sources

American Bureau of Shipping Record. Various years (1963–present).

"American Mail Line to show vessel at Portland Terminal No. 1 Monday." *Oregonian*. January 6, 1962.

"AML's Washington Mail." Marine Engineering / Log (March 1962), 61–72.

APL. "History – 1952–69 Vessel Statistics."

http://aplinfo.apl.com/history/timeline/stat8.htm#pro2.

"Around the Shipyards." Marine Engineering / Log (October 1971), 78.

"Blue Advance." Global Security Web site. http://www.globalsecurity.org/military/ops/blue-advance.htm.

"Distinctive Ships: AML Cargoliner 'Washington Mail.'" *Marine Engineering / Log* (December 1962), 80–81, 93–94.

- *Equality State* ex-*Washington Mail* historical information, vessel status cards, and milestones. MARAD Vessel History Database. http://www.marad.dot.gov/sh/ShipHistory/Detail/1464.
- Gerhardt, Frank A. "The Maritime Administration Shipbuilding Program from 1950 to 1984." Chart reproducing contract data found in the Records of the Maritime Administration (RG 357), National Archives and Records Administration,
 - http://appendix.usmaritimecommission.de/documents/documents_main.htm.
- ———. "Title V New Construction Contracts, for period beginning July 1st 1957." Chart reproducing financial data found in the Records of the Maritime Administration (RG 357), National Archives and Records Administration,
 - http://appendix.usmaritimecommission.de/documents/documents_main.htm.
- Kaufman, Michael T. "Junk's crew safe in Pacific rescue." New York Times. October 10, 1974, 10.
- Koehler, Erhard. "RRF Operation Desert Shield / Desert Storm readiness notes." Maritime Administration files, Washington, D.C.
- Lloyd's Register of Ships. Various years (1963–present).
- MARAD Division of Ship Maintenance and Repair. Office of Ship Operations. *Readiness Assessment of the RRF*, August 28, 1992. Maritime Administration files, Washington, D.C.
- "MarAd Approves Sale of Delta Steamship to United States Lines." *Maritime Reporter* (March 1985), 5.
- "Maritime Administration." Seapower 2006 Almanac (January 2006).
- "Navy Christens ACS at Tamps Shipyards." Maritime Reporter (June 1989), 11.
- "New freighter sets two Pacific records." New York Times. March 18, 1962.
- "New cargo liner sets record on run from Japan to Canada." *New York Times*. August 21, 1962, 65.
- "Pacific Marine." Marine Engineering / Log (June 15, 1965), 42G.
- Polmar, Norman. *Naval Institute Guide to the Ships and Aircraft of the U.S. Fleet*. 18th ed. Annapolis, Md.: Naval Institute Press, 2005.
- "Ready Reserve Force (RRF) Ship Manager." Global Security Web site. http://www.globalsecurity.org/military/agency/dot/rrf-sm.htm.
- Rost, Ronald F., John F. Addams, and John J. Nelson. *Sealift in Operation Desert Shield / Desert Storm: 7 August 1990 to 17 February 1991*, Report CRM 91-109. Alexandria, Va.: Center for Naval Analyses, May 1991.
- "RRF Activation Summary (Desert Shield / Desert Storm)." Maritime Administration files, Washington, D.C.
- "SS Oregon Mail: High-Speed Cargoliner Joins American Mail Line's Far East Service." *Marine Engineering / Log* (March 1963), 50–57, 119, 121.
- "SS Washington Mail launched for AML." Marine Digest. May 13, 1961, 1, 12.
- "\$13,000,000 ship to hold open house." Seattle Times. January 7, 1962.
- U.S. Congress. House Committee on the Judiciary. *The Ocean Freight Industry*. H. Rpt. 1419, 87th Cong. 2d. sess., March 12, 1962.
- U.S. Department of Transportation. Maritime Administration. *Annual Report of the Federal Maritime Board and Maritime Administration* 1960.
- ———. Annual Report of the Federal Maritime Board and Maritime Administration 1961.
- ———. Annual Report of the Maritime Administration 1962.

- ———. Maritime Administration Annual Report to Congress Fiscal Year 1999.
- ———. Maritime Administration Annual Report to Congress Fiscal Year 2005.
- —. National Defense Reserve Fleet Inventory Archive. http://www.marad.dot.gov/ships_shipping_landing_page/national_security/ship_operation s/national defense reserve fleet/NDRF Inventory Archive.htm.
- "U.S. freighters are in collision." Washington Post. April 27, 1966, A23.
- "U.S. Shipyard Production during 1962." Marine Engineering / Log (February 1963), 55.

Washington Mail vessel status cards. MARAD Vessel History Database.

http://www.marad.dot.gov/sh/ShipHistory/Detail/11532



Above: Washington Mail after being lengthened and converted to all-containerized cargo, photographed at Vancouver, British Columbia, November 11, 1972. Photograph by Walter E. Frost, City of Vancouver Archives, no. AM1506-S3-3-: CVA 447-8908. Right: American Builder, view showing Main Deck gantry crane for loading and offloading containers, ca. 1986. Maritime Administration photograph

