TEXAS PARKS AND WILDLIFE



From World War II Working-class Heroes to Artificial Reefs

J. Barto Arnold III, Jennifer L. Goloboy, Andrew W. Hall, Rebecca A. Hall Texas Historical Commission and J. Dale Shively Texas Parks and Wildlife

Bulletin No. 99-1

Texas' Liberty Ships

From World War II Working-class Heroes to Artificial Reefs

by

J. Barto Arnold III, Principal Investigator Jennifer L. Goloboy Andrew W. Hall Rebecca A. Hall Texas Historical Commission

and

J. Dale Shively, Editor Texas Parks and Wildlife



December 1998

J. Barto Arnold III Institute of Nautical Archaeology Texas A&M University P.O. Drawer HG College Station, Texas 77841-5137 J. Dale Shively Texas Parks and Wildlife Coastal Fisheries Division, Artificial Reef Program 4200 Smith School Road Austin, Texas 78744

ABSTRACT

In an ironic twist of fate, the stripped hulls of 12 Liberty Ships which survived enemy sinking attempts during World War II were intentionally sunk as artificial reefs in the Gulf of Mexico off the Texas coast during the mid-1970s. Texas acquired the surplus ships from the Maritime Administration Reserve Fleet and placed them at five sites during 1975-76 to create habitat for marine organisms. The Liberty Ships serve as reefs by providing a solid foundation for the growth and attachment of sessile organisms. This epitaph for these proud ships not only keeps their memory and history alive, but allows them to continue to serve the citizens of Texas by enhancing marine habitat through the Texas Parks and Wildlife Artificial Reef Program.

Liberty Ships were originally built to bolster the United State's inadequate merchant marine fleet at the beginning of World War II. Relatively inexpensive and expendable, Liberty Ships were virtually mass-produced, with 2,581 completed. Each ship was 441 feet in length and able to carry 10,088 tons of cargo in their five giant holds. These lightly armed ships carried numerous tons of cargo and thousands of troops to battle zones in Europe, Africa, and the South Pacific throughout World War II. The ships saw nearly every theater of war and traveled along several essential supply routes. Most of Texas' Liberty Ships joined the perilous North Atlantic convoys to Great Britain more than once. Many also made the treacherous Murmansk run, a cold, miserable, airplane and submarine-plagued journey through the Arctic Circle to northern Russia. The Liberty Ships helped save the Allied cause during World War II. After the war, they were moth balled in the Reserve Fleet, and then brought out to ship cargo to Europe under the Marshall Plan. The ships served again during the Korean War before being moth balled again.

In 1994, Texas Parks and Wildlife and the Texas Historical Commission jointly accepted the challenge to designate the ships in the Liberty Ship Reefs as historical heritage sites. The Liberty Ships in Texas readily attract sport anglers and scuba divers, offering them a dual encounter with magnificent reefs and America's maritime heritage. Individual type EC-2 Liberty Ships lying in Texas waters include the: George Vancouver, William H. Allen, B.F. Shaw, Jim Bridger, George Dewey, Dwight L. Moody, George L. Farley, Edward W. Scripps, Joshua Thomas, Charles A. Dana, Rachel Jackson, and Conrad Weiser. Other WWII ships found in Texas waters include the V.A. Fogg (ex-SS Four Lakes) and the John Worthington (Type 2 Tanker). While these ships had similar functions during WWII, each has a unique and fascinating wartime history. This report documents that history and their role in the

artificial reef program.



TABLE OF CONTENTS

List of Figures	iv
List of Tables	vi
Acknowledgments	vii
Introduction	1
Texas Liberty Ships	2
Ship Histories	15
SS William H. Allen	15
SS Jim Bridger	17
SS Charles A. Dana	20
SS George Dewey	23
SS George L. Farley	27
SS V.A. Fogg (ex-SS Four Lakes)	31
SS Rachel Jackson	38
SS Dwight L. Moody	41
SS Edward W. Scripps	45
SS B.F. Shaw	49
SS Joshua Thomas	53
SS George Vancouver	56
SS Conrad Weiser	60
SS John Worthington	68
Liberty Ships Built in Texas	73
Liberty Ships and the Texas Artificial Reef Program	87
Acquisition of Texas' Liberty Ships	88
Determination of Artificial Reef Sites	89
Sinking Process	91
Location	94
Texas Legislation and the Artificial Reef Program	102
Conclusions	103
References	104
Appendices	
1. Vessel Status Cards	107
2. Instructions to Masters	114
3. Instructions to Armed Guards	115
4. Lists of Sample Crew and Equipment Issued	130

LIST OF FIGURES

Figure 1. Location of the Liberty Ship artificial reef sites off the coast of Texas Figure 2. Liberty Ship production line at the California Shipbuilding Corp. Courtesy	Page 2
of the Library of Congress (Hoehling 1990).	Page 2
Figure 3. Modular construction of a Liberty Ship (Pitt 1978).	Page 3
Figure 4. Elevation drawing of a Liberty Ship (Sawyer and Mitchell 1973).	Page 4
Figure 5. General specifications for the Liberty Ships (Bunker 1973).	e
Figure 6. View of the engine room of an EC-2 Liberty Ship (Douglas and Salz 1943).	Page 5
Figure 7. Small, compact shower on a Liberty Ship, particularly welcome to members	Page 5
of the "black gang" after their watch (Douglas and Salz 1943).	Page 5
Figure 8. Officer's messman in the mess room of a Liberty Ship (Douglas and Salz 1943).	Page 6
Figure 9. Crewmen relax in the mess hall of a Liberty Ship (Douglas and Salz 1943).	•
	Page 6
Figure 10. Testing the davits for launching a boat on a Liberty Ship (Douglas and Salz 1943)	Page 6
Figure 11. Bullet-proof shutters in the wheelhouse of a Liberty Ship (Douglas and Salz 1943)	Page 7
Figure 12. Athwart ship view of the wheelhouse of the restored Liberty Ship	Dago 7
John W. Brown (Photo by Barto Arnold 1995)	Page 7
Figure 13. Helm and engine enunciator on the <i>John W. Brown</i> (Photo by Barto Arnold 1995)	Page 7
Figure 14. Topside conning station located above the wheelhouse on the <i>John W. Brown</i> .	
In fair weather the Liberty Ships were usually steered from this position since the	D 7
view from the wheelhouse is very restricted (Photo by Barto Arnold 1995).	Page 7
Figure 15. Officer's cabin on the <i>John W. Brown</i> (Photo by Barto Arnold 1995).	Page 7
Figure 16. Three-inch gun on the bow of the <i>John W. Brown</i> (Photo by Barto Arnold 1995)	Page 8
Figure 17. Twenty-mm gun on the John W. Brown. Note the so-called plastic armor on	D
the outside of the gun tub (Photo by Barto Arnold 1995).	Page 8
Figure 18. Five-inch gun on the stern of the <i>John W. Brown</i> (Photo by Barto Arnold 1995)	Page 8
Figure 19. Stowage of palletized 155-mm ammunition in the No. 2 hold of a Liberty Ship,	
Leghorn, Italy, Jan. 8, 1945 (National Archives).	Page 10
Figure 20. Army "ducks" which operate from ship to shore carrying cargo from Liberty	
Ships to shore are shown being loaded with gasoline drums, Bassin Darse Nord,	
Le Havre, France, 470th and 819th Amph. Truck Co., Nov. 15, 1944 (National Archives)	Page 12
Figure 21. At a French port ammunition receives priority handling from Liberty Ship to	
railway box car for quick dispatch to the front. Off loading by pallets as shown permits	
the handling of 30 boxes at one time, containing 60 projectiles for the 105 mm	
howitzer, the backbone of the US field artillery, Nov. 4, 1944 (National Archives).	Page 12
Figure 22. First group of men to leave staging area in Antwerp, Belgium board Liberty Ship	
that will take them to the United States for discharge, July 5, 1945 (National Archives).	Page 14
Figure 23. Liberty Ship steaming with anti-torpedo nets deployed (National Archives).	Page 21
Figure 24. SS George Dewey, Sept. 3, 1943 (National Archives).	Page 23
Figure 25. Hourly V-bomb frequencies logged at Antwerp, Belgium from December 25, 1944	
to January 8, 1945	Page 29
Figure 26. Sketch of a T-2 tanker (Talbot-Booth 1949: 201).	Page 31
Figure 27. Explosion damage to the V.A. Fogg from the USCG accident report.	Page 36
Figure 28. A Liberty Ship pitches in rough seas, North Atlantic, December 1943. A number	
of ships broke apart in such conditions, giving the type a bad reputation among	
merchant seamen. The danger was increased by the use of welded construction,	
which allowed a crack to spread from one plate to the next, and the common	
practice of ballasting the vessels too lightly (Imperial War Museum).	Page 43

Figure 29. SS <i>Conrad Weiser</i> , April 23, 1944 (National Archives) Figure 30. A prewar photograph of the <i>John Worthington</i> covered with snow. (From	Page 61
Standard Oil of New Jersey, Ships of the Esso Fleet in World War II.) Figure 31. Profiles and relative sizes of a Liberty Ship, a T-2 tanker, and the	Page 68
<i>John Worthington</i> (Andy Hall 1995) Figure 32. Damage to the <i>John Worthington</i> 's hull at Tank No. 8. The explosion punctured the bulkheads fore and aft of Tank 8, flooding Tanks 7 and 9 as well. Photo probably taken after her arrival in Texas on June 21, 1943. (From Standard Oil of New Jersey,	Page 69
The Esso Fleet in World War II.)	Page 72
Figure 33. Liberty Ships built at Houston, Texas in numbers per month (Sawyer and Mitchell 1973)	Page 74
Figure 34. Allied shipping losses vs. new construction, 1939-1945.	Page 74
Figure 35. The SS James W. Fannin was produced in Texas in May 1943. It survived the war	0
and was grounded and wrecked near Halifax in 1966 (United States Naval Institute) Figure 36. The SS <i>Benjamin R. Milan</i> was produced in Texas in June 1943. It sank near Baltimore harbor after a boiler room explosion in March 1945, but was later repaired.	Page 75
After several name changes, it was scrapped in 1968 (United States Naval Institute) Figure 37. The SS <i>Mirabeau B. Lamar</i> was produced in Texas in July 1942 was later scrapped	Page 75
at Mobile, Alabama in January 1963 (United States Naval Institute) Figure 38. The SS <i>Anson Jones</i> was produced in Texas in May 1943 and later scrapped in	Page 77
 Shanghai in 1969 (United States Naval Institute). Figure 39. The SS <i>Jose Navarro</i> was built in Texas in October 1943. It was damaged by a U-178 submarine in the Indian Ocean in December 1943 while carrying Army stores and mules. She was abandoned, reboarded, and abandoned again. The <i>Navarro</i> was 	Page 79
torpedoed again and sunk by the same submarine. She was streaming anti-torpedo nets when attacked, but the torpedo struck forward of the net (United States Naval Institute).	Page 80
Figure 40. One of the twelve Liberty Ships awaiting the cutting tourch at Andy International, Incorporated's ship breaking yard in Brownsville, Texas. The ships were cut down for sinking to serve as artificial reefs in a program carried out by the Texas Coastal	D 01
and Marine Council in 1975-76 (Texas Coastal and Marine Council 1975)	Page 91
Ships (Texas Coastal and Marine Council 1975).	Page 92
Figure 42. Sides were removed down to the last deck level (Texas Coastal and Marine Council 1975).	Dago 02
Figure 43. Tons of scrap metal were salvaged from each of the Liberty Ships for	Page 92
recycling (Texas Coastal and Marine Council 1975).	Page 92
Figure 44. Artifacts such as this anchor were salvaged and sold or donated to various	1 age 92
organizations (Texas Coastal and Marine Council 1975).	Page 92
Figure 45. Aerial view of two of the twelve Liberty Ships that were prepared for sinking as artificial reefs. The ship on the right has had the superstructure and main deck removed.	1 age 92
Deck openings seen here plus large side windows provide water circulation and access	
for fish (Texas Coastal and Marine Council 1975).	Page 92
Figure 46. All petroleum products and water were removed by pumps (Texas Coastal and Marine Council 1975).	Page 93
Figure 47. During the final stages of clean-up, the ships were steam cleaned to remove	
remaining contaminants (Texas Coastal and Marine Council 1975).	Page 93
Figure 48. Inside view of a cleaned Liberty Ship that is ready for sinking. Note holes	
in left side to allow for water circulation (Texas Coastal and Marine Council 1975)	Page 93

Figure 49. Cuts made in the hull of a Liberty Ship provided adequate water circulation	
and access for fish when the ship rested on the bottom of the Gulf of Mexico (Texas	
Coastal and Marine Council 1975).	Page 93
Figure 50. Settling stern-first into the 100 foot deep water of the Gulf of Mexico, this Liberty	U U
Ship hull provided habitat for marine organisms and enhanced harvest by fishermen in	
the area (Texas Coastal and Marine Council 1975).	Page 93
Figure 51. With the stern already resting on the bottom, the bow of this Liberty Ship	0
submerged to form a part of an artificial reef (Texas Coastal and Marine Council 1975)	Page 93
Figure 52. Site map of the Vancouver Liberty Ship Reef.	Page 95
Figure 53. Side scan sonar record of the Vancouver Liberty Ship Reef (John Chance and	0 **
Associates 1995).	Page 95
Figure 54. Site map of the Freeport Liberty Ship Reef. The triangle represents the HL&P	0
Reef. The square is the Galveston County/Conoco structure. The Star Reef is the	
cluster of oil rigs between the two Liberty Ships.	Page 96
Figure 55. Side scan sonar record of the Freeport Liberty Ship Reef (John Chance and	U
Associates 1995).	Page 96
Figure 56. Site map of the Matagorda Island Liberty Ship Reef.	Page 97
Figure 57. Side scan sonar record of the Matagorda Island Liberty Ship Reef (John	U
Chance and Associates 1995).	Page 97
Figure 58. Site map of the Mustang Island Liberty Ship Reef. The Rachel Jackson's hull	0
has broken in two.	Page 98
Figure 59. Side scan sonar record of the Mustang Island Liberty Ship Reef (John Chance and	Ū
Associates 1995).	Page 98
Figure 60. Site map of the Port Mansfield Liberty Ship Reef.	Page 99
Figure 61a. Side scan sonar record of the center and west ship at the Port Mansfield Liberty	0
Ship Reef (John Chance and Associates 1995).	Page 99
Figure 61b. Side scan sonar record of the east ship at the Port Mansfield Liberty Ship Reef	U
(John Chance and Associates 1995).	Page 100
Figure 62. Site map of the John Worthington wreck (Pearson and Simmons 1994).	Page 100
Figure 63. Side scan sonar record of the John Worthington wreck (Pearson and	U
Simmons 1994).	Page 100

LIST OF TABLES

Table 1. Ships located at each reef site with water depth information (Mean Lower	
Low Water).	Page 94
Table 2. Center points of each Liberty Ship reef site and the Worthington as determined	
by Differential Geographic Positioning System in North American Datum 1927 and	
1983 (NAD27 and 83). Sailing directions are magnetic compass bearings from jettied	
entrance channels.	Page 101
Table 3. Locations of individual Liberty Ships and other material at each reef site.	-
Coordinates are for each ship and other reef components in North American	
Datum 1927 and 1983 (NAD27 and 83).	Page 101
	-

ACKNOWLEDGMENTS

The project was funded by the Artificial Reef Program of Texas Parks and Wildlife (TPW). Hal Osburn and Jan Culberson (TPW), and Jim Morrison (Chairman of the Artificial Reef Advisory Committee) supported the project concept. Barto Arnold was the Principal Investigator for this project and conducted the archival research, assembled the report, and drafted sections of it. Jennifer L. Goloboy did historical research and drafted the background and history of the Liberty Ships in the Texas artificial reefs. Andrew and Rebecca Hall expanded the individual ship histories and wrote the history of construction of Liberty Ships in Texas. Lynda Rushlau, an intern at the Texas Historical Commission (THC), wrote the first draft of the individual ship histories. Sara Keys, another THC intern, helped with proof

reading. J. Dale Shively (TPW) drafted the artificial reef section, edited the report, and coordinated the layout and printing. Special thanks to Richard von Doenhoff and Angie Van Dereedt of the National Archives, to Robert Nevland and William Dudley of the Naval Historical Center, and to Paul Johnston of the Smithsonian Institution for their help making the Armed Guard reports and other archival information available. Thank you, Capt. David R. Smith and Robert E. Gustafson of Project Liberty Ship SS John W. Brown for a fascinating and in-depth tour of the restored vessel at Baltimore. Vontell Frost-Tucker, Public Affairs Specialist with the Maritime Administration, USDOT, was very helpful and courteous in supplying vessel status cards, photographs, and other information.

INTRODUCTION

World War II was reaching its climactic phases over fifty years ago. The recent fiftieth anniversary of World War II puts the events officially into the historical realm, and leads us to consider what sites we have in Texas that can shed light on those titanic events. In five artificial reef sites off the Texas coast there are ships that played a key roll in the Allied victory over the Axis Powers. The purpose of this study is to tell the story of those ships and to provide information to enhance the experience of those who visit the sites and to the general public. The artificial reefs are frequently visited by recreational divers and by sport fishermen. The information in this report, in abbreviated form, will add a dimension of heritage appreciation to their visits. The Liberty Ship reefs represent an ideal example of appropriate private sector access to historic shipwreck sites.

The report has three sections. The first section contains the general history of the Liberty Ships in World War II with an emphasis on the interesting events from the service of the ships in the Texas reefs. The second section has individual ship biographies derived mainly from the trip reports of the Naval Armed Guard units that served on each ship during the war.¹ The third section provides information on the five artificial reef sites in Texas including global positioning system data (GPS). Appendices present vessel status cards from the U.S. Maritime Administration. Instructions to Masters. Instructions for Armed Guards and lists of a sample crew and equipment issued. Copies of all materials retrieved from the National Archive are in the library of the Coastal Fisheries Division of Texas Parks and Wildlife (TPW), Austin. The complete file on each ship was not copied, only the pages with pertinent information. This amounted to about one-third to

half of each file. Gaps in the dates for voyages indicate that not all of the trip reports on a given ship were documented in the Navy's file. Copies of secondary historical information obtained during the project are also on file with TPW.

In doing the archival research, the senior author realized that it would be an easy matter to also retrieve Naval Armed Guard reports on two tankers that were World War II veterans and which now lie in Texas waters. The *V.A. Fogg* was previously named the *Four Lakes*, a T-2 tanker. The location of the *Fogg* wreck was selected as the site for one of the Liberty ship reefs. The *John Worthington* was built in 1920. After being torpedoed off Brazil, she made it back to Galveston, but was past repair. She ended up abandoned in the Lydia Ann Channel opposite the historic light house near Port Aransas. The stories of these two wrecks were added to this report.

Interestingly, the 12 Liberty Ships that ended up in Texas artificial reefs are a good representative sample of the experience of over 2700 other sister ships. Members of our select sorority were on the Atlantic convoys; in the Mediterranean; on the dreaded Murmansk run; in the Persian Gulf, India, and the Pacific; and at the D-Day and Philippine invasions. They were in every theater of the war except the Aleutians. The naval combatant ships, the aircraft carriers and the battleships, get the glory, but the war could not have been prosecuted and won without the transportation of vast numbers of men and quantities of supplies in the merchant ships such as the ships described here.

Reference: Naval Ordnance and Gunnery. Volume 1. Naval Ordnance. NavPers 10797-A. Washington: U.S. Government Printing Office, 1957.

¹The Naval Armed Guard Reports are filed by vessel name at the National Archives, RG 38, Naval Transportation Service, Armed Guard files 1940-1945. Copies are on file at the THC and TPW.

Editor's Note: A clarification needs to be made concerning the terms that describe guns on board Liberty Ships. Throughout this document the reader will see the terms "mm," "inches," and "caliber" to indicate gun measurements. The terms are used in a naval context, not as they may be used for hand-held firearm. For all naval guns that use shells 3 inches or larger in diameter, the length of the gun is expressed by caliber, which is calculated by dividing the length of the bore plus the chamber by the diameter of the bore. Thus, for example, a 3 inch/50 caliber naval gun fires 3-inch diameter shells and is 150 inches long (3 inches times 50 caliber equals 150 inches). In general, the longer the barrel, the more accurate the gun. The term "mm" refers to the bore (and shell) diameter of a machine gun such as an antiaircraft or multi-purpose gun.

TEXAS LIBERTY SHIPS

In the Gulf of Mexico, off the coast of Texas, the stripped shells of 12 Liberty Ships are slowly becoming covered with coral (Figure 1). By their side lies the wreck of a T-2 tanker, the *V.A. Fogg* (ex-SS *Four Lakes*), blown apart by a benzene explosion in 1972. The sites at which these ships were scuttled have become popular with scuba divers and sport fishermen, who have discovered "concentrations of fishes at locations and at times when they would otherwise be lacking" (Ditton et al. 1979: 31). The peaceful second career of these ships is in sharp contrast to their role in World War II when they, and other merchant marine vessels, helped save the Allied cause.

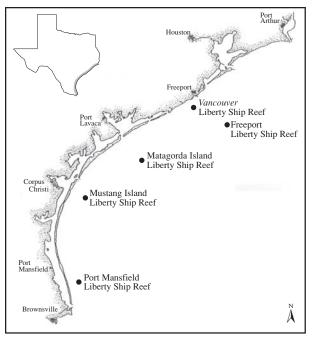


Figure 1. Location of the Liberty Ship artificial reef sites off the coast of Texas.

The Liberty Ship program was founded with two goals: the ships would be built quickly, and they would be able to carry large amounts of cargo (Figure 2). The US had an inadequate merchant marine at the beginning of World War II, and the German and Japanese submarines would be certain to reduce it even further. Luckily, two American companies, Todd Shipyards and Henry J. Kaiser's Six Services Inc., had already used an applicable design to build the "Ocean" class of ships for the British government. After some modifications were made to the plan to streamline production, the construction of the Liberties began (Sawyer and Mitchell 1973: 12-15). The Liberty Ships were virtually mass produced with a total of 2,581 of the EC-2-S-C1 type completed (Stewart 1992: 24). In contrast, 705 tankers were built (Lane et al. 1951: 4), which were not all of the T-2 type. These ships were "plain-Jane," working vessels: relatively inexpensive and expendable.

Henry J. Kaiser's company, a novice in shipbuilding, brought original ideas to the construction of these ships. In order to speed the completion of the Liberties, they were built mostly on land. Components were subcontracted out all over the country, preventing bottlenecks in production (Douglas and Salz 1943: 58-9). When the parts arrived at the shipyard, they were put into the "filing system." Cranes lifted prefabricated components into place in the hull, rather than laying the hull first and having workers building up from inside it (Figure 3). Tugs then took the ship to the finishing area, where the engine was installed (Pitt 1978: 192). The idea of constructing ships like cars, in an assembly-line process, was not originated by the Kaiser shipyards,

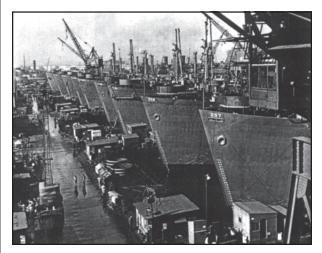


Figure 2. Liberty Ship production line at the California Shipbuilding Corp. Courtesy of the Library of Congress (Hoehling 1990).

but the youth of these shipyards meant that they were built to take advantage of this technique.

Another time-saver from the Kaiser shipyards was the use of welding instead of riveting as much as possible (Foster 1989: 83-4). Unfortunately, the welding would occasionally crack in cold weather, such as that along the Murmansk route to northern Russia (Hoehling 1990: 152, Gleichauf 1990: 85, 88-90). Some of the design modifications from the original British plans also made the hull more likely to crack (Sawyer and Mitchell 1973: 17). The *Edward W. Scripps*, one of the artificial reef program's ships, suffered a welding failure in rough weather. As the armed guard officer wrote,

Left anchorage off Bangor at 0355, January 1, 1944, and proceeded out to join convoy. A rough sea was encountered soon after getting out into open water and the ship pitched continuously, sometimes, violently. That condition prevailed throughout that day and the next night, with the ship vibrating considerably whenever the propeller cleared the water. The engineers were in constant attendance in an effort to keep the engine from racing and we found it increasingly difficult to keep up with the convoy. As we were heading into a sea that was coming in just slightly off the port bow, and pitching violently, there was added vibration. At one time, 0355 on the morning of January 2, we were struck so hard that some men were thrown from their bunks and others thought we had been torpedoed.

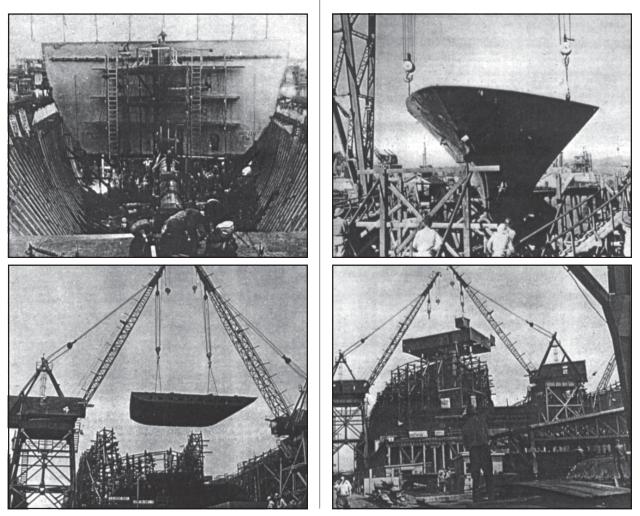


Figure 3. Modular construction of a Liberty Ship (Pitt 1978).

When daylight came, the captain and chief engineer made an inspection of the ship and found that three plates on the main deck were cracked, one to port of the forward side of number 3 hatch and another, a bit, adjoining that. A crack had also appeared similarly to starboard. Also on the starboard side a crack was found aft near number 4 hatch. As the wind was still increasing, the captain decided again to return and notified the convoy escort. We were finding it difficult to keep speed and to continue might mean further damage to the vessel. At 0955 on January 2, therefore, we turned about and made for the Clyde River, anchoring at Gourock at 0835 on January 3 (Edward R. Scripps, January 4, 1944).

The damage to the *Edward R. Scripps* might have been partly due to the fact that she was carrying insufficient ballast when she entered the storm. Liberty Ships were built to carry cargo, and could become quite uncomfortable if under loaded. "My experience teaches me," wrote Lt. Sidney T. Feinberg, "that a Liberty ship carrying the present allotment of ballast [1500 tons] is subjected to excessive rolling even in a light or moderate sea, and in a heavy sea, it is impossible to man any guns forward of the housing" (*Dwight L. Moody* October 6, 1944). Programs were started to improve the quality of the welding, and minor design changes were made in the Liberties, but the Liberties could not be given more ballast during wartime.

The T-2 tanker program was similar to the Liberty ship program: both were a response to the necessities of war. As Louis L. Snyder wrote, "whoever won the battle for oil would win the war. Admiral Chester W. Nimitz at the beginning of the war stated that victory was a matter of 'beans, bullets, and oil.' By 1945 he had changed the order to 'oil, bullets, and beans'" (Snyder 1960: 320). Originally the American oil companies had been able to provide a sufficient number of tankers, but losses to enemy action caused some yards originally designed for Liberty Ships to build T-2 tankers instead. The design was a standard commercial one, already used by the Sun Shipbuilding and Dry Dock Company for the Standard Oil Company (Lane et al. 1951: 56).

The Liberty ships that were scuttled off the coast of Texas, the William H. Allen, Jim Bridger, B.F. Shaw, Charles A. Dana, George Dewey, George L. Farley, Rachel Jackson, Edward W. Scripps, Dwight L. Moody, Joshua Thomas, Conrad Weiser, and George Vancouver, were built in shipyards all over the country, but probably varied very little. (All were

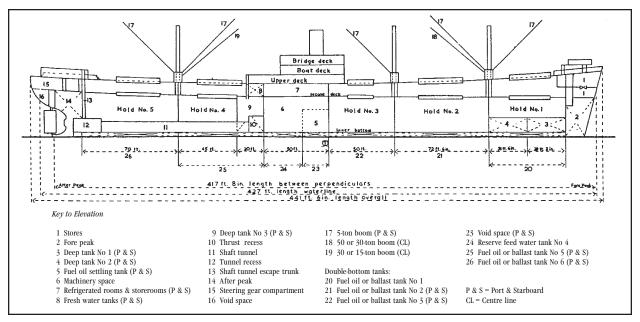


Figure 4. Elevation drawing of a Liberty Ship (Sawyer and Mitchell 1973).

standard EC-2 type Liberty ships.) Four hundred forty-one feet long, and able to carry 10,800 tons of cargo, the Liberties were inelegant and slow-moving. Their five giant holds took up most of the ship (Figures 4 and 5).

Two commands ran each merchant marine ship during World War II: a merchant marine crew and a Navy crew. The ships were owned by the US government and operated under contract by private shipping companies who provided the ships' officers and crew. Though the T-2 tankers had a different design from the Liberty Ships, and, of course, carried oil and petroleum products instead of solid cargo, the roles of the merchant marine and Navy crew were quite similar on both classes of ship. The merchant marine crews were divided into engineers, stewards, and deck men. The engine room, in the lowest part of the center of the ship, was so hot that men would commonly work stripped down to their undershirts (Figures 6 and 7).

GENERAL SPECIFICATIONS			
PRINCIPAL DIMENSIONS	WARPING WINCH		
Length over all	Steam, minimum pull 2500 lb. at 75 FPM, maximum pull 26000 lb. at 75 FPM.		
(25' 3¼' W.L) 416' Breadth molded 56' 10¾" Breadth extreme 57' Depth to upper deck, molded 28' 7" Draft 27' 9¼" Diaplacement 1425' tons Light hip (approx.) 333' tons Deadweight 10920 tons U.S. 7197 gr. t. Sugar. 1399 net t. Sugar. 7230 gr. t. Sugar. 7399 net t. Buret acting, condensing, three cylinder, triple expansion, developing 2500 horsepower at 76	AUXILIARIES Foroeller Generators Evaporator Distiller System Refrigeration Refrigeration 1 compressor, Carrier model 7H5; meat room 15°F, dairy room 30°F, vegetable room 40°F, fish room 15°F, secutio butt 5 gal. per hour at 40°F. 24 lbs. ice per freeze.		
RPM.	MASTS		
Engine size . bore 24½ "37".70" . stroke 48" Rated speed	(Height above bottom of keel plate) Foremast		
burning bunker "E" oil. Pressure: 220 PSI Temperature 450°F. Total heating surface 10,234 sq. ft. CARGO CAPACITY (cu. ft.)	CARGO WINCHES Nine, $7'' \times 12''$ double genered for 5, 15, & 30 ton booms, capacity 10,000 lb. at 125 FPM, 5,000 lb. at 250 FPM. One $10^{1}6'' \times 12''$ dou-		
Compartment Grain Bale Hold No. 1 Hold 41257 36083	ble geared for 5 ton boom. BOOMS		
Tween decks 42924 39322 Hold No. 2 Hold 98860 92008 Tween decks 46744 42630	Ten 5-ton (55' at hatch 1 & 2, 47' at 3, 55' at 4 & 5)		
Hold No. 3 Hold 68459 59793 Tween decks 27970 23904	One 30-ton (51' at hatch 2) One 15-ton (51' at hatch 4)		
Hold No. 4 Hold 58841 52574 Tween decks 35277 29689	TANK CAPACITY		
Hold No. 5 Hold 58620 51571 Tween decks 34570 30684	Fuel oil 50792 gal 1818 tons Fresh water 506272 gal 188 tons		
Deep tanks No. 1 port 3639 2729 No. 1 ethd 3639 3004 No. 2 port 7473 5294 No. 3 port 13674 12506 No. 4 atbd 13188 12024 total 562608 499573 ANCHORS Two hower-8410 lbs. each, one stream-3195 lbs.	STORES (cu. ft.) Bosns. stores, 2nd deck, FP to Fr. 112 3034 Bosns. stores, 2nd deck, FP to Fr. 112 3034 Bosns. stores, flat between 2nd and upper deck Galaxies, 2nd deck, Fr. 88-106 3492 Cabin stores, 2nd deck, Fr. 88-106 4329 Linen locker Bonded stores B6 Meat (refrigerated) 801 Fish (refrigerated) 768 Dairy (refrigerated) 768 Dairy (refrigerated) 176		
ANCHOR WINDLASS	WATER BALLAST		
Steam, minimum speed 30 FPM.	98361 cu. ft		

Figure 5. General specifications for the Liberty Ships (Bunker 1972: 269).

The air smelled strongly of oil, and the engine noise was a constant distraction. Liberty Ships were equipped with massive triple-expansion steam engines. Maintaining the steam pressure was a difficult and dangerous job, because of the risk a pipe would burst and cause steam burns. The men of the "black gang" (so-called because of their tendency to become smeared with oil and in earlier days, covered with coal dust) were warned that even a small amount of water coming through the asbestos lining of the pipes could signal a major leak.

Directly above the engine room was the galley (Figure 8). The stewards were responsible for cooking and serving the food, as well as buying supplies. Besides the regular meals, Liberty Ships

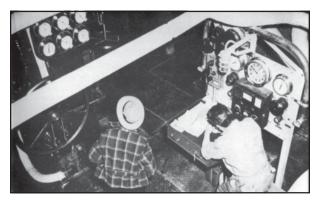


Figure 6. View of the engine room of an EC-2 Liberty Ship (Douglas and Salz 1943).

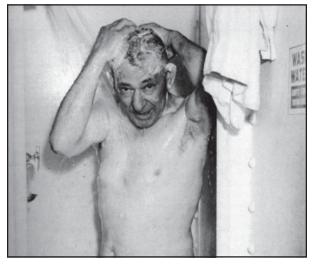


Figure 7. Small, compact shower on a Liberty Ship, particularly welcome to members of the "black gang" after their watch (Douglas and Salz 1943).



Figure 8. Officer's messman in the mess room of a Liberty Ship (Douglas and Salz 1943).



Figure 9. Crewmen relax in the mess hall of a Liberty Ship (Douglas and Salz 1943).

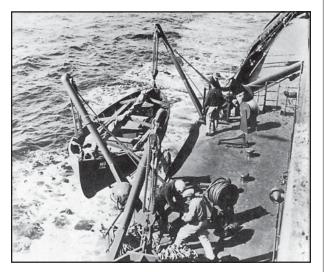


Figure 10. Testing the davits for launching a boat on a Liberty Ship (Douglas and Salz 1943).

also traditionally had coffee hours, which the men especially enjoyed in cold latitudes. Good food was considered important for morale (Figure 9). A. A. Hoehling (1990: 38-39), who served as a Navy officer on a Liberty Ship, wrote that his Liberty...

presumably like others, spoiled its voyagers with a culinary largess: bacon and eggs and/or hotcakes for breakfast; steak and a variety of meat for dinner, the midday meal, with vegetables; an entre again for supper, and always lots of potatoes and fresh-baked breads, plus pies, puddings, and other desserts. The already stocky among us augmented their avoirdupois.

Above the galley were two decks for accommodations, and above that the captain's stateroom and the wheel house. The wheel house, as well as the rest of the deck, was the domain of the deck men (Figure 10). At first assigned to paint, wash, and otherwise maintain the deck, some deck men would eventually stand watches and serve as helmsmen. A few would someday become captains of their own ships. The wheel house of a Liberty Ship had very small windows that during battle stations were closely shuttered, like a tank (Figures 11-15).² The helmsman would peer through the tiny slit, the ship's progress closely observed by the captain, who would stand watch or be on call on a 24-hour basis during the crossing. In World War II, deck men were also used as auxiliaries to the gun crew, though they would typically only be passing ammunition or firing the 20-mm or 37-mm antiaircraft and 0.50caliber machine guns, unless the Navy crew was "wiped out" (Douglas and Salz 1943: 51).

The captain was absolute master of the ship responsible by law for the navigation and safety of the vessel. A Naval Armed Guard officer was in charge of the defense of the ship. Generally, the Liberty Ships which were used for the artificial reef program were equipped with two 3" dual purpose guns and eight 20-mm antiaircraft machine guns, though

²Photos taken by the principal investigator onboard the fully restored WWII Liberty Ship *John W. Brown*. Restored by volunteers of Project Liberty Ship, the *Brown* is one of the last survivors of the great fleet of Liberty Ships.



Figure 11. Bullet-proof shutters in the wheelhouse of a Liberty Ship (Douglas and Salz 1943).

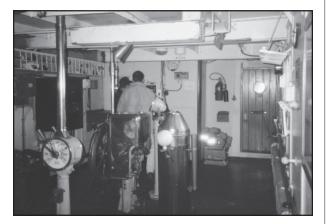


Figure 12. Athwart ship view of the wheelhouse of the restored Liberty Ship *John W. Brown* (Photo by Barto Arnold 1995).

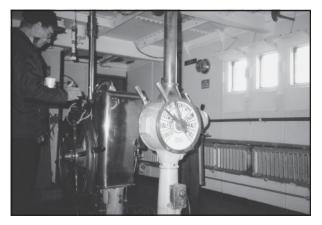


Figure 13. Helm and engine enunciator on the *John W. Brown* (Photo by Barto Arnold 1995).



Figure 14. Topside conning station located above the wheelhouse on the *John W. Brown*. In fair weather the Liberty Ships were usually steered from this position since the view from the wheelhouse is very restricted (Photo by Barto Arnold 1995).



Figure 15. Officer's cabin on the *John W. Brown* (Photo by Barto Arnold 1995).

occasionally one of the dual purpose guns was a 5", or they had nine of the 20-mm guns (Figures 16-18). The larger guns were typically placed at the bow and stern of the ship (Friedman 1983: 63-81). Hoehling discussed his opinion of these weapons.

These 3-inchers were classed as dualpurpose, able to depress toward targets afloat or to aim for the sky with equal facility. They were popular among both naval and merchant crews... The men liked the gun's basic qualities – "up 100! right 50!" – as well as the solid heft of the

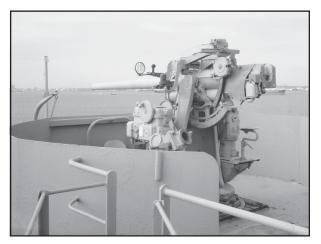


Figure 16. Three-inch gun on the bow of the *John W. Brown* (Photo by Barto Arnold 1995).



Figure 17. Twenty-mm gun on the *John W. Brown*. Note the so-called plastic armor on the outside of the gun tub (Photo by Barto Arnold 1995).

projectiles. The weapon discharged like a battleship unleashing a broadside. The range was quite sufficient, either for submarine or airplane. If the U-boat was near enough to take a good sighting, it was in range of the 3" 50.

The 20-mms could pour forth a stream of explosive bullets with similar effect, but they were prone to jams. By order, the officer commanding the gun crew must himself quickly don heavy padded gloves, fight the detachable red-hot barrel out of the massive recoil springs, then dump same into a cylinder of water. Otherwise, the projectile could explode within the barrel, showering the crew with fragments (Hoehling 1990: 39-40).

Aside from his responsibility for the weapons, the armed guard officer would write reports of their voyages for the Navy. These reports formed a major source of information for this paper.

The armed guard officer trained both commands during the voyage. The merchant marines were told that they could be promoted every six months (Douglas and Salz 1943: 99), and the navy men knew there was a shortage of officers to serve on all the new ships. Men continued to be trained to fill the roles they needed to play on the ship after their basic training ashore (US Navy 1943, 1944, 1945), as when Ensign Alfred M. Knapp reported that he had run gun drills for both the Navy and merchant crews (*George*



Figure 18. Five-inch gun on the stern of the *John W. Brown* (Photo by Barto Arnold 1995).

Vancouver August 7, 1944). In order to help the men advancing in rate, H. W. Bowles gave "special aid" in basic mathematics (*Edward W. Scripps* January 8, 1945). Lt. James Lee Thorne left a very detailed record of how the men had been trained in his command.

Aside from routine 3 sections of sea watches, and dawn and dusk watches. Morning Hours: (weather and conditions permitting) From 0900-1130, crew is usually turned to on general duties such as cleaning and greasing guns, painting, general repairs and additions to all naval gear and equipment. Afternoon Hours: (weather and conditions permitting) From 1300-1630 - leacture [sic] and practicum of the following, small arms and rifle handling, gun drills, loading and firing, cleaning and mainteance [sic] of guns, training, pointing, and eye shooting, (target practice when feasible), semophore [sic] and flag hoist, boat and fire drills and first aid, and discussions.

Evening Hours: study periods, include A-N, Blue Jackets Manuel [sic], P.O. requirements, and assignments & examinations from study books (*Joshua Thomas*, July 11, 1944).

Even though the men worked and trained together, the presence of two commands on board could cause tensions. The armed guard officer of the *Charles A. Dana* blamed the master and steward when food had to be rationed after two months at sea, when enough stores should have been purchased for six (*Charles A. Dana*, January 1944).

Relations between Lt. Marion Kenneth Vickery and the *Rachel Jackson*'s captain deteriorated completely. The captain never cradled the booms of the ship during the voyage, so that they blocked the guns. "To say the least," wrote Vickery,

it would have been suicide to the gunners had they been compelled to fire at planes, as the 20 M.M. projectiles would most certainly have exploded against the booms, cables, etc and would have covered the gunners with shrapnel. Vickery had several other complaints against the captain, including his refusal to rig out the life boats so that they could be quickly used, and his concealment of submarine warnings that came in over the radio. What seems to have made Vickery angriest was the captain's behavior after Vickery used the Navy signalmen to stand watch.

The captain rushed into my room and proceeded to bawl me out for using them without his permission. He stated that the Navy signalmen were under his command... I explained thoroughly that the signalmen were not under his command at all, but he assured me he was going to report me to the navy when we arrived back here, and that he was going to get this point cleared up (*Rachel Jackson*, Nov. 15, 1943).

Unfortunately for the captain, the port director sided with Vickery. Furthermore, "It was noted that [the captain] has a distinctive foreign accent which appears to be Germanic," and had already been listed on the Merchant Marine Suspect List as a possible Nazi sympathizer. It was decided to place the captain under further investigation. Most dual commands, however, seem to have been fairly successful, and a few even rather warm. Captain F. C. Assmus of the *Edward W. Scripps* was well-liked by every armed guard officer who served with him. He was called "very cordial" and "outstandingly helpful and cooperative" (*Edward W. Scripps* October 16, 1944; May 25, 1945).

By late 1943 the standard personnel allowance consisted of a boatswain's mate or coxswain, 2 gunner's mates, and 19 seamen first class. Two signalmen, plus one or two radiomen, depending on the number of commercial operators aboard, were also part of the command. Thus the total Navy complement might run to 26 or 27. Since the merchant crew usually numbered 35 or less, it was essential that the two work together as a 'team' (Britton 1947: 1496).

The merchant marine ships could be asked to travel anywhere. Liberty ships ended up with rather unusual cargoes (Figure 19). The *Jim Bridger* stopped at Rio de Janeiro on May 26, 1943 to drop off a cargo of coal, and pick up 25 tons of rock crystal and 52 tons of mail. The *Dwight L. Moody* spent August and September 1943 carrying sugar around Puerto Rico, Cuba, and Florida. Most cargoes, however, were less innocuous; the Liberties were mainly used to carry the material of war. One of the *Edward W. Scripps's* petty officers was horrified to find longshoremen smoking around their cargo – general explosives (*Edward W. Scripps* 13 November 1944). The *George Vancouver* spent August and September 1943 bringing Italian prisoners of war to America.

Slow-moving and under-armed, Liberties and T-2 tankers only traveled alone in the safer seas. Usually they were convoyed, which meant that escorts shepherded them in long straight lines with other cargo and tanker ships generally spaced 500 feet ahead and astern and 1,000 feet to the sides. The ship in front on the port side carried the convoy commander or commodore, and signaled warnings to the other ships. Both the *George Vancouver* and the *George Dewey* carried convoy commanders.

The Texas Liberties traveled in convoy along several important supply routes. For example, most of them joined the perilous North Atlantic convoy to Great Britain more than once. Another supply route was the Murmansk run, a cold, miserable, airplane and submarine-plagued journey through the Arctic Circle

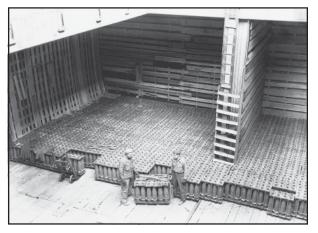


Figure 19. Stowage of palletized 155-mm ammunition in the No. 2 hold of a Liberty Ship, Leghorn, Italy, Jan. 8, 1945 (National Archives).

to Northern Russia. As Hoehling (1990: 26) imagined as he waited to receive his assignment,

According to a bit of graveyard apocrypha with which most of us became familiar, Ensign Smith – shall we label him? – looks up at the clarion of his name. A pause, then the ringing pronouncement of a code we, every one of us, had been dreading like death itself: Murmansk!

Smith blanches, then slowly rises to his feet. He pulls his service revolver from out of its holster, aims at his temple, and falls down with a terrible thud. The officer seated beside him sadly shakes his head, observing laconically, 'Any of us would have done the same thing.'

The *Joshua Thomas* ran general equipment, explosives, and ammunition to Northern Russia in the springs of 1944 and 1945. By May, there were 24 hours of daylight, and they could be attacked by planes from occupied Norway at any time. One night in April 1944, a ship in the convoy was destroyed.

Ship #33 starboard side of convoy either torpedoed or struck a mine. Ship split in two just forward of #4 hatch. The after part of the ship stayed afloat until out of our sight. Forward section sank in approximately 2 minutes (*Joshua Thomas* May 7, 1944).

The escorts immediately began dropping depth charges, and other ships in the convoy began shooting wildly, but no culprit could be found.

Convoyed Texas Liberty Ships also participated in some of the best known campaigns of the war. At El Alamein, the battle that began to push the Germans from North Africa, the problem of supplies was critical (Snyder 1960: 276). The *George Vancouver* was one of the ships that brought material to Suez before the battle began, though unfortunately no record remains of what their cargo was. Presumably because the British led the Allied cause in the eastern Mediterranean, the *George Vancouver* was escorted to Suez by the British Royal Navy. Two of the artificial reef program's Liberty Ships served in the recapture of the Philippines from the Japanese. The Allies regained the Philippines by slowly winning nearby islands, so cargo ships that could reliably ferry troops were very important. The William H. Allen was present at the invasion of Eniwetok, dropping off marines and cargo, without encountering the enemy. The Jim Bridger brought general navy cargo from Eniwetok Atoll to Tacloban on Leyte Island. On the way, as the Jim Bridger was traveling as the last ship in the port column, the lookout spotted a periscope. The escort was notified, and searched for several hours, but no submarine was found. After several runs shuttling material up the coast of New Guinea, the Jim Bridger also participated in a landing at Mindanao, in the Philippine Islands. Their cargo consisted of...

landing mats, 500# and 1000# bombs, 100 octane gasoline in metal drums, fins for air bombs, Army Signal Corps equipment, 155 mm projectiles and small arms ammunition, metal construction material, construction machinery, pilings and crated aircraft (*Jim Bridger* 23 April 1945).

Both the *William H. Allen* and the *Jim Bridger* earned Philippine Liberation ribbons for their services.

Liberty Ships assisted in the massive troop movements necessary for the invasion of Normandy. The Edward W. Scripps brought Army and Red Cross personnel and vehicles to France. "While in France and in and near Southampton, England," wrote Lt. Thomas F. Sartell, "we had 56 air-raid warnings from June 6, 1944, to August 1, 1944, and on four occasions fired at enemy aircraft, expending a total of 986 rounds of 20 millimeter and 53 rounds of 3inch, 50-caliber a.a. ammunition." The Jim Bridger brought Army and Navy equipment and personnel to Omaha and Utah beaches. While they were at anchor off Omaha beach, they could see enemy aircraft overhead every night from dusk to dawn (Jim Bridger June 1944). The George Dewey spent June through October 1944 bringing Army troops and materiel to Omaha and Utah beach. The ship served as acting commodore several times for small convoys around the coast of France. At one point

when they were not acting as commodore, their convoy got into trouble.

On the outgoing voyage [from Southampton, England, to Utah Beachhead, France] at 1530 on 29 June 1944 the convoy ran into a cluster of mines about three miles north of buoy JIG. At that time the convoy was in three columns, this ship being number two in the port column. At 1530 the ship astern of this ship exploded a mine at the stern and began to settle at the stern. Ship number four turned to starboard to avoid number three and hit a mine at her bow at 1537. At 1540 the number three ship in the middle column exploded a mine at her stern and seemed to be on fire at the stern afterwards. It is believed that another ship in the middle hit or exploded another mine at 1545 (George Dewey July 1, 1944).

As the invasion continued, the *George Dewey*, landing in Rouen, supported the Allied armies as they moved deeper into France (Figures 20-21). The *George Dewey* won an Operation and Engagement Star for participating in the bombardment of the coast of France.

It should be apparent by now that though the merchant marine ships were not designed to wage war, they often found themselves in the midst of battle. The captains were told that the "ship shall be defended by her armament, by maneuver, and by every available means as long as possible. When in the judgment of the Master, capture is inevitable, he shall scuttle the ship" (Navy Dept., March 30, 1942, George Dewey papers). While sailing, the men of the Liberties faced terrifying sneak attacks. One dark and drizzly night, the convoy in which the Dwight L. Moody was traveling off the coast of Ireland was attacked with no warning. Two ships were torpedoed (Dwight L. Moody September 10, 1944). In August 1943, the Charles A. Dana was sailing from New York to Liverpool. After a submarine had been attacked by the escort but not, apparently, destroyed, there was an explosion close to the side of the ship. The engine room notified the bridge that something had struck the ship and slid along the side for almost 15 feet. What this object

might have been could not be ascertained, because nothing further was observed (*Charles A. Dana* August 29, 1943).

Sometimes the men on the Liberty ships were able to fight back. Lt. M. K. Vickery, of the Rachel Jackson, reported that his men had attacked a submarine. Originally the lookouts believed they had spotted a large box or a crate. When they realized they had seen a conning tower, they trained the ship's 3"/50 caliber gun on the submarine, and it submerged and fired a torpedo at them. The torpedo missed them entirely. The submarine resurfaced, and was fired upon four times, the second round exploding as it struck. Vickery believed that his men had succeeded in "badly damaging and possibly sinking the vessel" (Rachel Jackson May 10, 1943). While sailing to Alexandria, Egypt, the Rachel Jackson was again attacked. As Lt. Nat Hancock wrote,

On the 5 August at 0040, while in position 32'02" North, 20'10" East, watch reported white flare and 20-mm bursts 3 points on the port quarter, apparently from ship on



Figure 20. Army "ducks" which operate from ship to shore carrying cargo from Liberty Ships to shore are shown being loaded with gasoline drums, Bassin Darse Nord, Le Havre, France, 470th and 819th Amph. Truck Co., Nov. 15, 1944 (National Archives).

the left flank of convoy. Received signals for smoke screen and of approaching emeny [sic] aircraft. Ships on left flank of convoy firing and several explosions thought to be depth charges were heard. Received radio distress message from ship number 15. Heard planes over convoy. An emeny [sic] plane possibly a JU88 approached ship from aft of the star-beam [sic], opened fire on this plane at approximately 750 to 1000 yards, the plane banked deep to the starboard forward of this ship, and flying approximately 300 feet disappeared in the smoke screen. Although no actual damage was observed to this plane, tracer fire from this ship was definitely going into this plane. Also fired on plane on port side, no bombs or torpedoes were observed to be droped [sic] by either plane (Rachel Jackson August 7, 1944).

Though the open waters were dangerous, being in port was no guarantee of safety. The *George Dewey* was in the harbor of Augusta, Sicily on New Year's Eve, 1943, when the city was attacked by German bombers. Eight planes, coming in at a fairly high altitude, began bombing the ships in the harbor. The shore batteries



Figure 21. At a French port ammunition receives priority handling from Liberty Ship to railway box car for quick dispatch to the front. Off loading by pallets as shown permits the handling of 30 boxes at one time, containing 60 projectiles for the 105-mm howitzer, the backbone of the US field artillery, Nov. 4, 1944 (National Archives).

and the ships responded. The *George Dewey* began firing its 3"/50 caliber and its 20-mm guns, but the larger guns were quickly found to be more useful. As the gun deck became littered with brass shells, one of the Navy crew attempted to throw them overboard, and ended up with badly burned hands. At the end of the battle it was discovered that eighty people had been killed in a communication center on shore, and seven people in ships in the harbor. What must have made the situation even more terrifying for the men of the *George Dewey* was their highly flammable cargo: hi-test gasoline and ammunition.

Perhaps the bravest of all the men of the Liberty Ships were the crew of the *George L. Farley*, in Antwerp from December 1944 to January 1945. The city and harbor were constantly bombarded by German V-1 and V-2s. The city had been open for shipping since November 26, but the Germans knew that it would be used for the advance into Germany, and were fighting back fiercely. During their 14 day stay in Antwerp, the men of the *George L. Farley* stood 11 air raid alarms and logged 454 V bombs. One of the most terrible days was January 1, 1945.

This was the day of the big air battle over Belgium when the Luftwaffe was out in force. At 0846 all men were at their battle stations and A.A. fire was heavy and continuous at all point of the compass. Sky was black with A.A. bursts in all areas over Antwerp. Numerous dog fights were observed over the dock area and over the town.

The all clear was given at 1130, but Lt. John P. Maguire kept his men in a state of readiness. The first run of bombers had mainly attacked onshore installations. When they came back after dark, the *George L. Farley* was not so lucky. At 2347,

an enemy plane, with motors cut glided down upon our ship, strafing as it came in and dropping a light fragmentation bomb which landed off our port quarter about 40 yds. away. This plane was immediately followed by another which, using the same tactics, came in over our starboard beam and dropped a bomb which landed on the dock broad on our port beam. This plane was also strafing and as the aft watch took cover from the strafing, the general alarm did not ring until 2348... At 2349, the crew was getting into the gun tubs when a third raider gilded in over our starboard quarter, strafing and dropping a bomb which landed on the dock, 20 yds. off our starboard quarter, and showered the aft gun tubs with debris. At this time the #5 and #7 20MMs were manned and ready but the plane, flying very low, banked off sharply at 180 degrees, relative so that it was impossible to open fire without hitting the other ships.

The ship's situation was not helped by the disorganization onshore. The air raid alarm did not start sounding until 2357, after the attack on the ship was over. The barrage balloons, whose wires kept planes from flying too low, were taken down from their sites around the city and the docks just before the raid, and were put up again afterwards. The strafing attack would have been impossible had the balloons been left in place.

On January 8, while the Liberty Ship was taking on ballast, a V-2 rocket bomb hit 60 yards off their port bow.

The force of the explosion broke the window in the pilot house and wheel house. It buckeled [sic] the steam pipe guards. Blew all the hatches open. Smashed the life preserver lights., [sic] knocked down and stunned Meadows, SIC, who was the forward watch at that time and momentarily knocked down and stunned this officer, who at that time was on his way to make an examination of the forward magazine, prior to departure. The bomb struck directly among a group of deck workers and soldiers who wwere [sic] unloading the SS Blenheim, immediatly [sic] forward of us. Debris, bomb fragments showered upon our deck along with parts of human vicera [sic] and a human head, mangled beyond all recognition.

After he ascertained that no one had been killed on his ship, Lt. Maguire and three crewmen hurried

over to the SS *Blenheim*. The *Blenheim* had been terribly damaged internally, and the men from the Liberty Ship hurried to give first aid and morphine to the casualties. Lt. Maguire and the *Blenheim's* armed guard officer then went to inspect the magazines and calm the rest of the crew. About 12 men were killed and another 12 seriously injured by the bomb. The incident is also reported from the *Blenheim* crew's viewpoint by Gleichauf (1990: 74-75).

During this terrible stay at Antwerp, the men of the *George L. Farley* did not give in to their fear, but focused on how the situation might be made less difficult for the ships that would dock after them. Lt. Maguire recommended that the men stay within the ship as much as possible, because its steel sides would give relative safety. The navy officer made a chart of the number of V bombs that fell at different times of day, showing that morning was the safest time, and dawn, dusk, and midnight the most dangerous (*Edward W. Scripps* Nov. 13, 1944).

Thanks to the bravery of the men who served on them, their ability to get supplies, food, and troops where they were most needed, and the unexpected durability of their construction, the Liberty Ships and T-2 tankers helped save the Allied cause in World War II (Figure 22). The artificial reef program's ships played an important part in this struggle. After the war, they were moth balled in the Reserve Fleet, and then recommissioned to ship cargo to Europe under the Marshall Plan. They served again in the Korean War. Today they rest in the Gulf of Mexico, helping the Texas recreational diving and sport fishing industries, and becoming part of the seascape.

Under conditions completely different from the military needs for which they were constructed, the artificial reef program's ships continue to have useful histories.



Figure 22. First group of men to leave staging area in Antwerp, Belgium board Liberty Ship that will take them to the United States for discharge, July 5, 1945 (National Archives).

SHIP HISTORIES

This section of the report contains historical accounts of the World War II experience of each Liberty Ship in the Texas artificial reef program, plus two tankers. The primary sources for the ship biographies are the Armed Guard reports of voyages. In the National Archives are files for each merchant ship that was armed and had a Navy gun crew assigned. The Armed Guard officer filed a report on each voyage with much information of historical interest. One section described any contact with the enemy, and another was for any other significant events. The files provide information needed to trace the voyages of each ship which was used to produce the tables shown here. Gaps in the record result from missing voyage reports. Not every report made it to its proper file.

SS William H. Allen

Named for the historian and lecturer, the *William H. Allen* was completed by the Permanente Metals Corp. of Richmond, California on August 3, 1943. Soon thereafter, shipyard crews fitted the *Allen* with a pair of 3-inch guns, forward and aft, and eight 20-mm antiaircraft guns. The War Shipping Administration chartered her to the Isthmian Steamship Company for operations in the war zone.

On August 17, 1943, the Allen sailed from San Francisco with a general cargo. She sailed alone across the Pacific, zig-zagging to thwart submarine attacks, and arrived at Espirito Santo in the New Hebrides Islands on September 17. From there she sailed to Purvis Bay, in the Solomons. The Allen sailed on October 3 to Guadalcanal, where she unloaded a cargo of motor fuels, then sailed for Espirito Santo in convoy with one other merchantman and two destroyer escorts. After three days at Espirito Santo, she sailed on October 9 with the other merchant vessel and a single escort. The following days, in accordance with orders, the Allen left the others and set a northeasterly course for San Francisco. She made good time, with her master and mates pushing her along at speeds of up to 13 knots, passing the Golden Gate on October 28, 1943.

After a week in San Francisco, the *William H. Allen* steamed to Port Hueneme, California, where she took on a large quantity of general cargo. She continued on to San Diego on November 11, where she took on deck cargo, and sailed for Noumea, New Caledonia on the evening of November 13. She sailed without escort, and arrived without incident at Noumea on December 5, 1943.

The Allen's next recorded voyage began on January 6, 1944, when she sailed from Noumea with a general cargo. In company with three other merchantmen and protected by three escorts, the Allen arrived at the Russell Islands on January 14, where she unloaded her cargo and took on a new one. From the Russells, she sailed in convoy with one other merchantman and two escorts to Tarawa, arriving on February 16. The small convoy sailed the next day for Kwajelein in the Marshall Group, where they were joined by a third escort, and continued on to Eniwetok. The convoy arrived on February 22, the day Marines landed on Parry Island, the last defended outpost in the atoll. The fight was short and bloody, with the Japanese firing from small, well-concealed nests. The Marines responded with naval gunfire and a particularly gruesome weapon, the tank-mounted flame thrower. By the end of the day, the island and the atoll were firmly in US hands, at the total cost of 339 American and 2,677 Japanese dead (Morison 1963:314-16).

The *William H. Allen* departed Eniwetok for Pearl Harbor on March 5, 1944, in company with three other merchantmen and three escorts. The voyage passed uneventfully, and the *Allen* arrived in Hawaii 10 days later. After a two-day stop at Pearl Harbor, the *Allen* sailed in ballast for San Francisco. She arrived on March 26, and shortly afterward was moved across the bay to Oakland. There she took on a general cargo and sailed independently for Pearl Harbor on April 10, and arrived 10 days later. After unloading, she returned to San Francisco in ballast, arriving on May 6, 1944.

At Port Hueneme, California, the *Allen* took on a load of general cargo and sailed independently for Morobe, New Guinea on May 27. At Morobe she joined a convoy and sailed to Manus in the Admiralty Islands, arriving on June 29, 1944.

In late August, the *Allen* loaded coal at Port Kembele, New South Wales, Australia, and sailed independently for Noumea. She arrived there without incident on August 30. She then proceeded to Wallis Island, where she took on a cargo of scrap metal. On September 17 she sailed independently for Pago Pago, American Samoa, where she arrived the following day.

Early November 1944 found the *William H. Allen* in Oakland, loading cargo consigned to the Army. She sailed independently from Oakland on November 5 for Finschhafen, New Guinea, and then continued on to Hollandia. At Hollandia, she joined a 54-ship convoy supporting the invasion of Leyte Island in the Philippines. She arrived at Leyte on December 21. The *Allen* remained at Leyte for a month. On January 23, 1945, she sailed in convoy for Hollandia, and then continued independently in ballast to Sydney, Australia, where she arrived on February 7. For her service in the Philippines during the winter of 1944-45, the officers and crew of the *William H. Allen* were later awarded the Philippine Liberation Ribbon.

The *Allen* remained in the southwest Pacific for the next several months. On April 21, 1945, the Liberty sailed in ballast for San Francisco. On the long passage across the Pacific, the *Allen's* Naval Armed Guard busied themselves with gun drills, naval training courses and small arms exercises. After arriving at San Francisco on May 14, she moved across the bay to Oakland, where she took on a load of general cargo consigned to the Army. She sailed independently for the Philippines on June 8, and arrived at Cebu by way of Leyte on July 8.

At Cebu she discharged her cargo, and sailed in ballast for Hollandia on July 20. From Hollandia she continued on to Australia, arriving at Brisbane on the continent's eastern coast on August 3. Loaded with another cargo of Army equipment and supplies, she sailed for Manila on August 17, arriving a fortnight later.

The *Allen* may have completed one or more round voyages in the fall of 1945. On November 4, the *Allen* sailed empty from Manila to Guiuan in the Philippines. From Guiuan she moved to Tacloban, where she took on a cargo of equipment and supplies for US Army occupation forces in Japan. She sailed for Tokyo Bay on November 28, and arrived at Yokohama on December 6. She returned to Manila for another cargo, and was back in Yokohama by mid-January 1946. On January 27, the *William H. Allen* sailed for San Francisco, and arrived there on February 15.

Over the next several months, the *Allen* passed eastbound through the Panama Canal and entered the Gulf of Mexico. On July 29, 1946, at Galveston, the *Allen* was re-chartered to her wartime operators, the Isthmian Steamship Company. She was chartered to Isthmian a third time that December in Mobile, Alabama. In January 1950, she was chartered to the Mississippi Shipping Company at New Orleans, but was deposited with the National Defense Reserve Fleet at Beaumont (Archeological Site No. 41GV136).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	San Francisco	Espirito Santo, New Hebrides	8/17/43	9/7/43
2	Purvis Bay, Solomon Is.	San Francisco	10/3/43	10/28/43
3	San Diego	Noumea, New Caledonia	11/13/43	12/4/43
4	New Caledonia	Pearl Harbor	1/6/44	3/15/44
5	Pearl Harbor	San Francisco	3/17/44	3/26/44
6	Oakland, CA	Pearl Harbor	4/10/44	4/20/44
7	Pearl Harbor	San Francisco	4/27/44	5/6/44
8	Port Hueme, CA	Manus, Admiralty Is.	5/27/44	6/29/44
9	Port Kembla, New South Wales	Noumea, New Caledonia	8/25/44	8/30/44
10	Wallis Is.	Pago Pago, American Samoa	9/17/44	9/18/44
11	Oakland, CA	Leyte Island, P.I.	11/5/44	12/21/44

SS William H. Allen

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
12	Leyte Island, P.I.	Sydney, Australia	1/23/45	2/7/45
13	Brisbane, Australia	Leyte Is.	3/2/45	3/22/45
14	Hollandia, New Guinea	San Francisco	4/21/45	5/14/45
15	Oakland, CA	Lebu, P.I.	6/8/45	7/8/45
16	Lebu, P.I.	Brisbane, Australia	7/20/45	8/3/45
17	Brisbane, Australia	Manila, P.I.	8/17/45	8/31/45
18	Manila, P.I.	Guivan, P.I.	11/4/45	11/7/45
19	Tacloban, P.I.	Yokohama, Japan	11/28/45	12/6/45
20	Manila, P.I.	Yokohama, Japan	1/8/46	1/27/46
21	Yokohama, Japan	San Francisco	1/27/46	2/15/46

SS Jim Bridger

James "Jim" Bridger was a frontiersman, fur trader and scout who established Fort Bridger, Wyoming in 1834. The Liberty Ship named for him was built by the Oregon Shipbuilding Corporation in Portland, Oregon, and was completed on Christmas Day, 1942. The *Jim Bridger* was owned by the War Shipping Administration and operated by James Griffiths & Sons, Inc. On December 26, 1942 she was equipped with a 3"/50 caliber gun and nine 20-mm guns, and furnished with her Armed Guard. In August 1943, one 20-mm gun was removed and an additional 3"/50 caliber gun put in its place.

The *Jim Bridger* sailed first to the Mediterranean. She passed through the Suez Canal, and sailed independently from Suez, Egypt on March 25, 1943. She arrived at Aden on March 30. New orders directed her to head to Lourenco Marques, in Portuguese South Africa (now Mozambique), after first calling at Durban, further down the coast. On March 31, the *Bridger* departed Aden and entered the Indian Ocean through the Mozambique Channel. On April 10, her orders were again changed. The ship was to head directly to Lourenco Marques. She arrived April 12. She loaded a cargo of coal, traveled through heavy seas, independently arrived at Durban on April 24, and anchored in the outer harbor.

The *Jim Bridger* left Durban April 30 in a thirteen-ship convoy escorted by three British patrol craft and headed to Capetown. From Capetown, she sailed independently to Saldanha, a small port about

60 miles northwest of Capetown. There she joined a convoy that sailed farther up the Atlantic coast of Africa to Walvis Bay. From there the *Jim Bridger* crossed the Atlantic independently to Rio de Janeiro, where she dropped off her cargo of coal and picked up 25 tons of rock crystals and 52 tons of mail. She then sailed to Santos, the seaport serving the Brazilian city of São Paulo, and picked up 7,955 tons of coffee. The cargo ship then sailed in a small convoy for Trinidad, and from there headed on July 8 to New York. During this leg of the voyage, the Jim Bridger carried the convoy's vice commodore. A number of ships left or joined the convoy along the route. Lookouts sighted what they believed to be a submarine on July 12 near Guantanamo Bay, Cuba. General Quarters was set, but no action developed and Condition 3 watch was resumed the next morning. The convoy arrived at New York late on the night of July 19. Early the next morning a pilot boarded the Bridger and conned her into the harbor to discharge her cargo.

The ship left New York on August 19, 1943, and steamed in convoy for Newport, a small harbor on the Welsh coast. There were 58 ships in the convoy, with an escort of six. For the first two days out, a blimp was among the escorts. There were no contacts with the enemy, but heavy weather forced the ships to use stern lights on the night of August 25. Six days later, the gunners were forced to shroud the bow gun as heavy seas were breaking over it. The 3-inch gun was test fired on September 2 and found to be in working order. The *Bridger* sailed from Newport on September 19 in a convoy of 72 ships with 10 escorts. The convoy encountered thick fog, but the passage was otherwise uneventful.

On November 4, 1943, the ship left Norfolk for the Rooka Float Anchorage and Khorramshar, Iran. She sailed in a 63-ship convoy with an escort of 13 vessels and arrived December 22. American escorts shepherded the merchantmen until November 21, when the convoy passed the Straits of Gibraltar. There a group of British escorts assumed responsibility for the convoy. The escorts made several attacks on suspected submarines, without clear success, and floating mines were spotted November 27 and 29.

The *Bridger* passed through the Suez Canal and continued on to Iran, where she off loaded supplies that would eventually be taken overland to support the Soviet Union. On the return route, when the *Bridger* was in the Gulf of Oman, a British naval officer boarded the ship and directed her to sail independently to Port Sudan. She then sailed to Alexandria, where she joined a convoy of 47 vessels and five escorts. US escorts took command as the ships passed through the Straits of Gibraltar. The return trip to New York was calm, and the *Bridger* arrived on March 8, 1944.

The ship left for Wales on March 28, 1944. From there, she sailed to Plymouth, England, and then to Omaha Beach as a participant in the Normandy invasion. The nights of June 12-15 were harrowing for the crew. Enemy aircraft flew above the ship from dark until dawn. It was too dark to determine how many or what type. The ship never attempted to fire upon the aircraft because it was impossible to make a clear mark, and once firing began, the tracers might disclose the position of the ship. The crew and gunners went to General Quarters every time an alert sounded, and continued to man their stations until the "all clear" sounded.

The *Jim Bridger* made one additional trip between Plymouth and Omaha Beach, and then four round trips between Plymouth and Utah Beach. The cargo was the same every time, Army and Navy personnel and vehicles. No enemy was spotted during her second trip to Omaha Beach, but several enemy aircraft warnings were given. At these times, Navy personnel went to battle stations and guns were readied. The Liberty Ship's gunner continued to hold General Quarters at dawn and at dusk every day, and throughout the time the ship was anchored off Omaha Beach. During the trips to Utah Beach, no enemy was spotted but the escort did drop depth charges on several occasions.

The ship sailed from Belfast for New York on August 25, 1944. The voyage passed without incident, although on the sixth day out the convoy commodore ordered an emergency turn to starboard for an unknown reason. At New York, the Bridger took on a cargo of tanks, trucks and explosives, and joined a 68-ship convoy bound for Liverpool on September 26. Four corvettes served as close escorts. There was no direct contact with the enemy, but one ship in the convoy did report seeing what was thought to be a torpedo track September 29. After unloading at Liverpool, the Bridger sailed again for New York on October 25. There were 40 to 49 ships in the convoy, with an escort of seven corvettes and aircraft from a nearby escort carrier. The signal "submarine in vicinity" was hoisted by the convoy commodore on November 2, but no action developed. Aircraft flew above the convoy except during inclement weather, and no lights were shown until the convoy was off the American coast. She arrived November 10.

The next assignment called for the ship to leave New York November 18 and sail to San Francisco by way of the Panama Canal with a cargo of turret tracks and structural steel and framework. The voyage was uneventful, but four men from the ship were held briefly by Canal Zone police in Cristobal. The ship arrived in San Francisco December 9, 1944.

The Jim Bridger left San Francisco December 13, 1944, and sailed independently for Pearl Harbor and Eniwetok Atoll. She joined a convoy of 18 ships at Eniwetok; seven of these broke off at Ulithi. Thirty-eight additional vessels were picked up for the voyage from Kossol Roads to the final destination of Tacloban, Philippines. On January 31 at approximately 12:22 p.m. the aft lookout aboard the Jim Bridger reported spotting a periscope about 2,000 yards off the port quarter at approximately 09° 28' N, 129° 3' E. The Bridger sounded General Quarters, and the Liberty's battle stations were manned immediately. The master quickly hoisted a warning pennant, but could not sound a warning blast because the whistle would not work. Desperate attempts to alert the escort by blinker finally

resulted in one vessel turning back and searching for several hours, but the escort was unable to make a firm contact.

The *Bridger* arrived at Tacloban February 2, 1945. The *Bridger*'s crew was forced to settle in for a long wait in the anchorage. She was forced to lie at anchor for nearly four weeks before discharging her cargo, and then had to wait nine more days before receiving new orders.

The Jim Bridger left Tacloban March 13 and arrived in Hollandia, New Guinea on March 19. She then steamed towards Cairns, Australia, but before she reached her destination, orders were received directing her to go to Milne Bay, at the southeastern tip of New Guinea. She left Milne Bay March 26 with a cargo of steel runway landing mats and 1000-lb. air bombs, as well as 60 troops. The troops left the ship at Lae, New Guinea. The vessel arrived at Biak Island, north of New Guinea, on April 12, 1945. She left Biak with landing mats, 500-lb. and 1000-lb. bombs, 100 octane gasoline in metal drums, fins for air bombs, Army signal equipment, 155-mm projectiles and small arms ammunition and crated aircraft. She sailed to Polloc Harbor, on the west coast of Mindanao in the Philippines. Battle stations were manned daily at dusk and at dawn, and for a short time after arriving in port.

The ship left Mindanao May 8 and headed to Hollandia via Morotai. The *Jim Bridger* traveled in a convoy until she reached Morotai, where she was ordered to proceed independently to Hollandia. The ship left Hollandia May 15 and returned to Milne Bay. She returned to Hollandia May 23 with a cargo of 80 octane gasoline, diesel oil, command cars, bulldozers, carryalls and other vehicles. She left Hollandia and headed to Manila at a speed close to 12 knots. She initially zig-zagged, but stopped this maneuver May 31. The *Jim Bridger* arrived June 2, but was plagued by slow and intermittent discharging, and was not completely unloaded until June 17.

The *Jim Bridger* returned to Hollandia in mid-June. She left Hollandia June 27 and sailed to Brisbane, Australia with what was reported as a "special cargo" and 90 bags of mail. She arrived July 25. The voyage itself was uneventful, but the naval crew and the dock workers did clash at the port in Brisbane. The naval commander reported that a good deal of time was lost when the unionized stevedores knocked off work when it began to rain and at other unspecified periods.

In the fall of 1945 the *Jim Bridger* sailed independently with a cargo of Navy gear from Manus in the Admiralty Islands to Seattle, Washington. In Seattle, her armament and armed guard were removed October 5, 1945. The ship was transferred to the US East Coast, where she was placed in the Reserve on the James River. She was purchased in 1975 for use in the Texas Artificial Reef Program and sunk off the coast (Archeological Site No. 41MG84).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	Suez, Egypt	New York	4/25/43	
2	New York	Newport	8/20/43	9/4/43
3	Milford Haven, U.K.	New York	9/22/43	10/9/43
4	Norfolk, VA	Rooka Float Anchorage	11/4/43	12/22/43
5	Khorram Shahr, Iran	New York	1/7/44	3/8/44
6	New York	Cardiff, Wales	3/28/44	4/12/44
7	Plymouth, U.K.	Omaha Beach, France	6/11/44	6/12/44
8	Plymouth, U.K.	Omaha Beach, France	6/18/44	6/19/44
9	Plymouth, U.K.	Utah Beach, France	7/3/44	
10	Plymouth, U.K.	Utah Beach, France	7/9/44	
11	Plymouth, U.K.	Utah Beach, France	7/18/44	7/19/44

SS Jim Bridger

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
12	Plymouth, U.K.	Utah Beach, France	7/27/44	7/28/44
13	Belfast, Ireland	New York	8/25/44	9/7/44
14	Baltimore	Liverpool, U.K.	9/26/44	10/12/44
15	New York	San Francisco	11/18/44	12/9/44
16	San Francisco	Tacloban	12/13/44	2/2/45
17	Tacloban	Hollandia	3/13/45	3/19/45
18	Hollandia	Modewa, Milne Bay, N.G.	3/21/45	3/25/45
19	Modewa	Biak	3/26/45	4/12/45
20	Biak	Polloc Harbor, Mindanao, P.I.	4/16/45	
21	Polloc Harbor	Hollandia	5/8/45	
22	Hollandia	Ahioma, Milne Bay	5/15/45	5/18/45
23	Ahioma	Hollandia	5/23/45	
24	Hollandia	Manila, P.I.		
25	Hollandia	Brisbane, Australia	6/27/45	7/5/45
26	Brisbane	Manus, A.I.	7/18/45	7/25/45
27	Manus	Seattle, WA	8/8/45	9/4/45

SS Charles A. Dana

Charles Anderson Dana (1819-1897) was a newspaper editor and journalist. He made his reputation as managing editor of the New York Tribune. When he left that paper in 1862, after clashing with its editor-publisher, Horace Greeley, Dana was invited to joined the US War Department as a special investigator under the secretary of war, Edwin Stanton. Dana spent much of his time reporting to Stanton from the front, and in 1864-65 served as second assistant secretary of war. In 1868, Dana became part owner and editor of the New York Sun. Under Dana's leadership, the Sun became one of the era's most successful newspapers. The Sun was much admired and imitated, and helped to popularize what would later become known as the "human interest story."

The Liberty Ship *Charles A. Dana* was completed by the North Carolina Shipbuilding Company of Wilmington, North Carolina on July 22, 1943. That evening she was chartered to her assigned wartime operators, R. A. Nichol & Co. She carried a complement of 39 civilian officers, seamen and engineers, under the command of Master Viktor Peterson. On July 23, she received her new Naval Armed Guard, consisting of one commissioned officer, 24 enlisted gunners and two naval radiomen. She was fitted with a 3"/50 caliber dualpurpose gun on the bow, a second on the stern, and eight 20-mm antiaircraft guns – two by the after deck house, two abreast the foremast, and four around the top of the Liberty's midships superstructure.

The Dana steamed to New York, where on August 14, 1943 she set out in convoy for Great Britain. On August 18 and again on August 19, lookouts aboard reported hearing depth charges exploding ahead of the convoy. In the predawn hours of August 27, the lookouts reported flares and depth charge explosions off the port bow. An object broke the surface which appeared to be a submarine, and an escort made repeated runs past the object, firing heavy weapons and machine guns at it. The escorts continued to drop depth charges around the object, which remained on the surface as the convoy continued on. The warship carrying the escort commander continued firing on the object until the convoy was beyond the horizon, but joined up with the convoy later.

The convoy arrived safely at Liverpool on August 29. The *Dana* sailed again on September 9, 1943 in convoy for the United States. Ensign Leo E. Koons, USNR commanded the *Dana*'s Naval Armed Guard. The *Dana* arrived safely at Boston on September 23.

In Boston, the *Dana* took on a cargo of general supplies and equipment consigned to the US Army. She sailed in convoy on October 17, 1943, and arrived at Southampton on November 5. She sailed westward in convoy on November 21. On December 13, the day before the Liberty arrived at New York, one of her merchant seamen was lost overboard.

The Charles A. Dana remained in New York for nearly a month. On January 13, 1944, she sailed in convoy for Great Britain with more cargo consigned to the Army and 500 tons of steel bars. The Dana was directed to London to off load her cargo. She continued around the north coast of Scotland and down the east coast of Britain in a series of small coastal convoys. Early on the morning of February 2, 1944, just opposite the small Suffolk village of Aldeburgh, the Dana collided with another merchantman, the SS Catrine. The Dana was not seriously damaged and continued on to London, where repairs were made to the damaged shell plating. At Gravesend, on the south bank of the Thames, the Dana received a barrage balloon, which she flew on her trip upriver to the port. The balloon, an inflatable bag tethered several hundred feet above the ship by a steel cable, was intended to discourage low-flying attackers.

The *Dana* remained in London for 24 days. During that time, the Liberty's gunners went to general quarters 14 times during air attacks on the port. The ship was not hit, but the crew reported several near misses as German bombs fell into the surrounding waterfront area.

The *Dana* sailed again on February 26, 1944. The Liberty retraced her route around Britain and joined a US-bound convoy in early March. She arrived in New York on March 22.

The *Charles A. Dana* headed east again on April 20, this time to the Mediterranean. The Liberty arrived safely in Algiers, where she off loaded her cargo, and returned to the United States at New York on June 11, 1944.

In New York, the *Dana* took on a heavy cargo of aircraft bombs and military vehicles consigned to

the US military forces supporting the invasion in Normandy. She sailed in convoy on July 24, and upon her arrival in the British Isles, was routed again around Scotland to England's east coast. Off Scotland, the threat of mines forced the coastal convoy to pass single-file though narrow swept channels. Lookouts aboard the Liberty reported seeing 14 mines drifting near the ship. The Dana also practiced deploying her anti-torpedo nets, large drapes of lightweight metal mesh suspended around the ship from booms and intended to detonate torpedoes before they reached the hull (Figure 23). The Dana was directed to Inningham Dock, a small port on the south bank of the Humber Estuary, about 130 nautical miles north of London. The Dana arrived at Inningham on August 13, 1944.

She sailed again a week later. She joined a USbound convoy, and arrived in Boston on September 8. There she loaded more ordnance and trucks, and set out again in convoy on September 20, 1944. The crossing was a difficult one. The escorts – six warships and a single escort carrier – reported six submarine contacts during the crossing. Two merchantmen collided in a fog, and heavy winds and seas scattered the convoy and damaged several ships.

As the convoy approached the British Isles, detachments began breaking off for other ports. The *Dana* and several other ships continued on to the recently-liberated port of Cherbourg, France, arriving November 2, 1944.



Figure 23. Liberty Ship steaming with anti-torpedo nets deployed (National Archives).

In France, the members of the Armed Guard discovered that the Charles A. Dana's food supplies were running low. Although Liberty Ships were equipped to maintain a six months' supply of consumable items, Dana's larder was getting bare after just two months. The remaining stores were rationed, but eventually the Armed Guard crewmen had to obtain food supplies from Army quartermaster troops in France. Upon going ashore, the Armed Guard crew also discovered that they could not buy small convenience items like candy or cigarettes because they had never been issued the required ration cards. The master of the Dana and the steward, who was nominally in charge of the Liberty's consumable items, refused to alleviate the situation by providing or selling these items from ship's stores. Short rations and absence of convenience items naturally led to a disgruntled Navy crew. This incident provides a prime example of Navy/Merchant Marine friction, a particularly egregious one at that.

The *Dana* sailed from Cherbourg in convoy on November 26. The first day out, she became separated from the convoy and continued on alone. She rejoined another convoy, but the ships encountered heavy seas, and the *Dana* was again blown off course. The *Dana* entered New York harbor on December 22, 1944.

On January 28, 1945, the *Dana* sailed again for Europe. She arrived at Liverpool on February 11. She began her westbound crossing on February 17, and arrived safely in New York in mid-March.

On March 29, she sailed in convoy for Le Havre, France, arriving on April 15, 1945. She sailed for the United States on April 29, and was at sea when the war in Europe ended. Her westbound convoy consisted of 62 merchantmen and 10 escorts. She arrived at New York around the first of June, 1945.

The *Charles A. Dana* returned to Europe right away. She sailed for New York on June 6, 1945 – the first anniversary of the landings in Normandy – and arrived at Antwerp on June 21. She was back in New York in mid-July. She must have left immediately, for by the second week in August she was at Okinawa in the Pacific, preparing to return to the United States. She sailed from Okinawa on August 11, 1945, and finally arrived at Gulfport, Mississippi on January 3, 1946. On January 23, 1946 her armament was removed.

The *Dana* was chartered to the Norton Lilly Management Corporation on July 26, 1946 at New York, and rechartered to Norton Lilly under a different agreement at Norfolk, Virginia on September 4. On July 20, 1948 the *Dana* was chartered to Dichmann, Wright and Pugh, Inc., at Norfolk, which steamed the Liberty down the coast to Wilmington, North Carolina, where she was placed in the National Defense Reserve Fleet on August 2, 1948.

The *Charles A. Dana* returned to service for a few months during the Korean War, but in June 1952 was returned to the Reserve Fleet once again, this time at Beaumont, Texas. In June 1975, she was purchased by the State of Texas for inclusion in the Artificial Reef Program. After having her upper works removed and holes cut through her hull to admit light and free water circulation, the *Charles A. Dana* was scuttled on March 23, 1976 off Port Aransas (Archeological Site No. 41NU277).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	Wilmington	Savannah	7/26/43	7/27/43
2	New York	Liverpool	8/14/43	8/29/43
3	Liverpool	Boston	9/9/43	9/23/43
4	Boston	Southampton	10/17/43	11/5/43
5	Southampton	New York	11/21/43	12/14/43
6	New York	London	1/13/44	2/2/44
7	London	New York	2/26/44	3/22/44
8	New York	Algiers	4/20/44	6/11/44

SS Charles A. Dana

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
9	New York	Immingham	7/24/44	8/13/44
10	Immingham	Boston	8/20/44	9/8/44
11	Boston	Cherbourg	9/20/44	11/2/44
12	Cherbourg	New York	11/26/44	12/22/44
13	New York	Liverpool	1/28/45	2/11/45
14	Liverpool	New York	2/17/45	3/45
15	New York	Le Havre	3/29/45	4/15/45
16	Le Havre	New York	4/29/45	6/45
17	New York	Antwerp	6/6/45	6/21/45
18	Antwerp	New York	6/28/45	7/13/45
19	Okinawa	Gulfport, Mississippi	8/11/45	1/3/46

SS George Dewey

George Dewey was the American naval officer who defeated the Spanish at Manila Bay during the Spanish-American War. He later was promoted to admiral and served as the president of the Navy's General Board. The ship that bore his name was completed by the St. John's River Shipbuilding Co., Inc. of Jacksonville, Florida on August 27, 1942 (Figure 24). She was chartered to American Export Lines, Inc. of New York. In September she was armed with a pair of 3"/50 caliber dual-purpose guns and eight 20-mm antiaircraft weapons. She kept this armament throughout her service in World War II. To man the guns, the *Dewey* embarked a Naval Armed Guard unit of 26 enlisted men and one officer, Lieutenant (jg) Frank D. Bethel.

On September 16, 1943, the *Dewey* sailed from New York in a convoy of 85 merchant vessels escorted by 15 warships. The eastbound crossing passed uneventfully and the *Dewey* arrived at Belfast, Ireland, on September 30. She discharged her deck cargo there and sailed that same evening for Liverpool, where she arrived on October 2. After taking on ballast, she sailed on in a convoy of 75 merchantmen for New York. While at sea, on October 15, the convoy was warned that U-boat packs were thought to be forming in the area. The

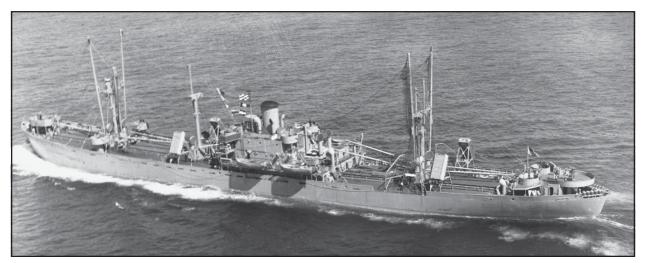


Figure 24. SS George Dewey, Sept. 3, 1943 (National Archives).

Dewey deployed her torpedo netting as a precaution. The following morning, an aircraft escorting the convoy sighted and attacked an enemy submarine. The submarine appears to have fired back and hit the plane, which crashed into the sea just off the *Dewey*'s port bow. An escorting vessel cut into the convoy and appeared to rescue the crew. The following day, the convoy commodore passed word that an eastbound convoy passing nearby had been attacked with the loss of one merchantman. There were no other attacks on the *Dewey*'s convoy, perhaps due to the deteriorating weather conditions, and the convoy arrived at New York safely on October 27, 1943.

The *Dewey* sailed again from New York on November 11 with general cargo for Oran in North Africa. She steamed down to Norfolk, Virginia, where she became part of a large convoy of 65 merchantmen and 13 escorts. Following the convoy at a distance was also a small escort aircraft carrier, with its own escort of four small warships. The weather during the passage was fine, and the convoy arrived without incident in North Africa on December 3.

In Oran the *Dewey* took on a cargo of high-test gasoline and explosives. Two days before Christmas, 1943, she sailed in convoy for Bari, Italy. En route, however, she was diverted to the harbor at Augusta, Sicily, where she remained until January 12, 1944. The crew of the *Dewey* later learned that the Bari anchorage had been bombed by the Luftwaffe, and that all vessels heading for Bari had been diverted to other ports. The officers and crew of the *Dewey* chafed at their vessel's inactivity, and wondered why the three weeks' delay was necessary.

What the crew of the *Dewey* did not know was that the attack on Bari was one of the most devastating of the war in the Mediterranean. The small Adriatic port, located at the base of the "heel" of the Italian boot, had become a major transfer point for supplies going to the British 8th Army, which was gradually fighting its way northward up the Italian peninsula. When the German bombers appeared overhead, below them were arrayed 30 freighters and tankers, busily unloading their cargoes of ammunition, bombs and gasoline under the glare of floodlights. Within 20 minutes, 17 ships (including five Liberty ships) were sunk outright or so badly damaged that they were not worth repairing. Six other vessels, including one Liberty, were damaged to a lesser degree. Wreckage filled the harbor and the wharves were reduced to a shambles. One of the wrecked ships had carried a cargo of mustard gas; this wafted over the harbor and town after the raid, further complicating the recovery effort (Bunker, 1990: 121-22).

While at Augusta on New Years' Eve, the harbor was attacked by several German bombers. The shore batteries opened fire at 1850, and the Dewey's gunner began firing at 1900. Over the next 45 minutes, the Dewey's gunners expended 61 rounds of 3-inch ammunition and over a thousand rounds from the 20-mm guns. The only casualty aboard the Dewey was a member of the Armed Guard at the stern 3-inch gun. When the deck of the gun mount became cluttered with spent shell casings, he attempted to pitch the hot brass overboard. He suffered badly burned hands in the process, but recovered quickly. There were more serious casualties ashore and on other ships. The Dewey's crew learned later that about eighty people had been killed on shore when a communications station was hit, and that seven men aboard ships in the harbor were killed by misdirected antiaircraft fire.

The *Dewey* later steamed to Bari, and then returned in convoy to Augusta. From there, she sailed in convoy to Bizerte, Tunisia. From there she proceeded to Naples, Italy, where the crew of the *Dewey* was frustrated at the very inefficient process of unloading their ship. The Italian civilian laborers, the officers felt, slowed down the process so much that it became necessary to bring US soldiers to the wharf to help unload the ship. Compounding their frustration at the situation was the fact that Naples was under almost constant enemy attack; there were six general alarms while the *Dewey* sat at the pier unloading. Naples port regulations restricted the Liberty's crew from taking part in the antiaircraft barrage.

After a brief stop again at Augusta, the *George Dewey* joined a large convoy headed for New York. While still in the Mediterranean, on the afternoon of February 22, 1944, the crew of the *Dewey* noted a tremendous explosion off the starboard side of the ship. The position was 37° 17' N, 7° 17' E. Signals passed through the convoy that two ships had been torpedoed. One ship was hit amidships, while the other appeared to have had her stern blown off. Both stricken vessels dropped out of the convoy, and appeared to be in very bad shape. The convoy continued on, arriving at New York in mid-March, 1944.

The Dewey sailed again on April 12, 1944, for England. She carried a cargo of general war material consigned to the Army. The Dewey was assigned position no. 57 - seventh ship in the fifth column in the 60-ship convoy, but on the second day out she was moved to position 63. On April 14, 18 more merchantmen and seven escorts from Halifax joined the convoy. The convoy crossed the Atlantic without serious problems, although the escorts depthcharged two possible submarine contacts. Four days out from Manchester, England, the convoy was overflown by a four-engine ocean reconnaissance plane, but the aircraft passed so high overhead that the gunners couldn't tell whether it was a German Focke-Wulf 200 Kondor or a British Short Sunderland flying boat. The convoy arrived safely on April 28.

The *Dewey* appears to have remained in English waters for the next month. She may have been preloaded with supplies for the invasion of northern France, which was widely anticipated to occur soon. On June 11, five days after the invasion in Normandy, the *Dewey* sailed from Southampton, the invasion's main staging point, for Omaha beachhead. She carried general cargo for the Army and an unknown number of troops. She transferred her cargo into unloading barges, and the officer commanding the Armed Guard noted that the civilian master and crew of the *Dewey* exhibited a "high degree of hospitality" to their charges.

She returned to Southampton, loaded again with general cargo and troops, and set out again for the invasion beaches on June 19. Once at the beachhead, rough seas and gale-force winds postponed the off loading until June 23. Many of the LCTs (Landing Craft – Tank) used to ferry cargo from the merchantmen to the beach had been lost in the storm, and so off loading the cargo was delayed still further. There were several air raids over the invasion fleet while the *Dewey* waited to offload her cargo, but all the bombs fell wide of their targets.

The *Dewey* returned to Southampton in convoy and again embarked general Army cargo. She also brought on board 299 Army enlisted men and 160 officers. She sailed in a convoy of 27 merchantmen and four escorts for the Utah beachhead on June 29. There were three columns of merchantmen; the *Dewey* was placed second in the portside column. En route, the convoy ran through a cluster of mines. The ship just astern of the *Dewey* exploded a mine at the stern and began to settle. The ship behind the stricken vessel swung to starboard to avoid the damaged vessel, and ran herself on a mine. A few moments later, the third ship in the middle column exploded a mine near her stern and appeared to catch fire. A second ship in the middle column was thought to have struck a mine, and the crew reported a fifth explosion of unknown source. The remaining ships arrived safely at the unloading area off Utah Beach, and returned to Southampton on July 1, 1944.

For her participation in the initial phases of the invasion of Normandy, the *George Dewey* was one of 149 merchant vessels whose crews received the Operation and Engagement Star.

Over the next four months, the *Dewey* made 13 more round trips to the unloading anchorages off the invasion beaches: three to the Omaha beachhead, then five to Utah, then one to Omaha, then three trips to Utah, and finally once more to Omaha. In every case, the Liberty carried general Army cargo and troops. On several occasions, the Dewey served as the convoy commodore's ship. The Dewey became one small part in the most massive logistical supply effort ever attempted to that time. One of the factors that made the Normandy operation successful was that the invasion beaches were far from any significant seaport. Many of the German officers planning the defense of the region had insisted that the invasion must come at or very close to one of the Channel ports, because the invaders would need the harbor facilities to bring in reinforcements and supplies. Instead the Allies landed on a series of isolated beaches and created their own harbors by sinking old ships as breakwaters and by placing prefabricated harbors called "Mulberries" off the invasion beaches. The George Dewey became part of this resupply effort, and made repeated visits to the Normandy beaches.

In November the *Dewey's* routine shifted slightly, and she began running between Southampton and the port of Rouen, France, on the Seine River. She sailed on her first voyage to Rouen on November 15, 1944, in a convoy of 12 merchantmen and one escort. The *Dewey* served as Convoy Commodore, as she would for the next seven trips. Her cargo again was general Army cargo and personnel. On this trip she also carried a contingent of 25 French Red Cross workers. On her voyages to and from Rouen, the *Dewey* often found herself delayed due to the extreme changes of tides in the Seine Estuary and the difficult navigating conditions.

Between November 1944 and March 1945, the George Dewey made nine round trips between Southampton and Rouen. She transported 4,781 tons of Army cargo, and 1,464 personnel. Most of the cargo on the later trips was trucks, brought in to provide the logistical support for the Allies' final push across the Rhine and into Germany. After her last trip to Rouen in mid-March 1945, she sailed in convoy from Southampton to Newport, England. At mid afternoon on March 21, en route to Newport, the convoy commodore's ship Parks was rocked by an underwater explosion, probably from a mine. The *Parks* swung out of column to starboard, settling by the stern. The second ship in the column, the American Press, also swung out of line. The fog closed in, and the crew of the *Dewey* could not see what became of the two merchantmen. The Dewey's radio operator contacted the convoy escort, which closed quickly on the spot of the Parks' emergency. Later that afternoon the fog lifted, and the American Press came up from astern, reporting that all crew members had been safely rescued from the Parks.

Loaded with ballast, the *George Dewey* joined a large westbound convoy at Newport on March 27, 1945. The convoy's 75-odd merchantmen were joined by 11 escorts. Three Merchant Aircraft Carriers, civilian vessels converted to carry antisubmarine aircraft, were included in the convoy. The convoy

encountered heavy seas for the first few days out, but made up for lost time on the latter half of the voyage and arrived in New York on April 14, 1945.

The *George Dewey* sailed from Norfolk with a 44ship convoy for the Mediterranean on May 13. She carried general cargo. The voyage passed uneventfully and she arrived at Marseilles, France on May 31, 1945. While there, she received orders directing her to the Pacific Theater. She took on a cargo of ammunition and "Army organizational equipment" and sailed independently for the Philippines on July 5, 1945. She passed through the Suez Canal and crossed the Indian Ocean, and arrived at Tacloban Leyte, the Philippines, on September 2, 1945. By that time, however, the war was over in the Pacific. After a brief layover at Tacloban, she set out on September 9 alone across the Pacific for New Orleans. She arrived at the Crescent City on October 21, 1945. There she was disarmed.

The George Dewey was chartered again to American Export Lines on June 20, 1946. It is not clear from available documentation whether there was any break between the line's wartime management of the vessel and her new charter. In late 1947 her charter was transferred to Boland and Cornelius, and on January 6, 1948, she joined the Reserve Fleet in the Hudson River. She remained "in mothballs" until September 1951, when she was briefly chartered to the West Coast Trans-Oceanic Steamship Line, possibly for service during the Korean War. She returned to the Reserve Fleet, this time at Beaumont, in May 1952. In August 1975, the George Dewey was purchased by the State of Texas to be sunk as an artificial reef (Archeological Site No. 41MG85).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	New York	Liverpool, England	9/16/43	10/2/43
2	Liverpool, England	New York		10/27/43
3	New York	Oran, Algeria	11/11/43	12/3/43
4	Oran, Algeria	Bari, Italy; Bizerte, Tunisia;		
		Naples, Italy; New York	12/23/43	3/44
5	New York	Manchester, England	4/12/44	4/28/44
6	Southampton, England	Omaha Beach, France	6/11/44	6/12/44
7	Southampton, England	Omaha Beach, France	6/19/44	6/19/44

SS George Dewey

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
8	Southampton, England	Omaha Beach, France	6/29/44	6/29/44
9	Southampton, England	Omaha Beach, France	7/3/44	7/3/44
10	Southampton, England	Omaha Beach, France	7/7/44	7/7/44
11	Southampton, England	Omaha Beach, France	7/11/44	7/11/44
12	Southampton, England	Utah Beach, France	7/18/44	7/18/44
13	Southampton, England	Utah Beach, France	7/25/44	7/25/44
14	Southampton, England	Utah Beach, France	8/1/44	8/1/44
15	Southampton, England	Utah Beach, France	8/15/44	8/15/44
16	Southampton, England	Utah Beach, France	8/25/44	8/25/44
17	Southampton, England	Omaha Beach, France	9/1/44	9/1/44
18	Southampton, England	Utah Beach, France	9/11/44	9/11/44
19	Southampton, England	Utah Beach, France	9/21/44	9/22/44
20	Southampton, England	Utah Beach, France	9/30/44	9/30/44
21	Southampton, England	Omaha Beach, France	10/27/44	10/28/44
22	Southampton, England	Rouen, France	11/15/44	11/16/44
23	Southampton, England	Rouen, France	11/25/44	11/29/44
24	Southampton, England	Rouen, France	12/11/44	12/15/44
25	Southampton, England	Rouen, France	1/1/45	1/3/45
26	Southampton, England	Rouen, France	1/9/45	1/13/45
27	Southampton, England	Rouen, France	2/7/45	2/10/45
28	Southampton, England	Rouen, France	2/25/45	2/26/45
29	Southampton, England	Le Havre, France	3/5/45	3/6/45
30	Southampton, England	Rouen, France	3/14/45	3/16/45
31	Newport, Wales	New York	3/27/45	4/14/45
32	Norfolk, Virginia	Marseilles, France	5/13/45	5/31/45
33	Marseilles, France	Tacloban, Leyte, PI	7/5/45	9/2/45
34	Tacloban, Leyte, PI	New Orleans, LA	9/9/45	10/21/45

SS George L. Farley

George L. Farley was known for his agricultural work. His namesake Liberty Ship was completed by the New England Shipbuilding Corporation in South Portland, Maine, on July 20, 1944. The ship was operated by Boland & Cornelius Company, Inc. One 5"/38 caliber gun, one 3"/50 caliber gun and eight 20-mm guns were installed July 17.

Her first journey was in a twelve-ship convoy with three escorts leaving Boston on August 7 and

arriving at Halifax, Nova Scotia on August 9. With a cargo of trucks, she joined a large convoy of 107 vessels bound for Oban, Scotland, a small harbor on the Firth of Lorn, about 55 miles northwest of Glasgow. There were six corvettes, one destroyer, and three small aircraft carriers transporting a total of 10 planes serving as escorts. The convoy reached its destination without incident, and from Oban the *George Farley* traveled in small convoys until it reached Milford Haven. At Milford Haven, the convoy broke up and the *Farley* retraced her wake north-

ward to Glasgow, arriving on October 23. She unloaded her cargo at Glasgow in just under five days, and sailed on October 29 for New York in a convoy of 66 merchantmen, with two small aircraft carriers and four corvettes as escorts.

She left New York on November 29, 1944, bound for Antwerp in a 40-ship convoy with three corvettes as escorts. Gale-type weather briefly caused the George Farley to stray from formation out of New York, but she caught up with her convoy within two days. At 11:40 p.m. on December 21, while running up the English Channel, lookouts spotted red flares and star shells ahead of the convoy. In the ensuing 10 minutes, more star shells were reported and shore batteries responded with gunfire. Running lights, which were being used to keep formation and avoid collision in the mineinfested Channel, went out all over the convoy. Even though no order was given, the entire convoy went to lights out. The Farley went to General Quarters, and the lookouts reported more gunfire and at least seven depth charge explosions off in the darkness. The convoy maintained its speed, and the *Farley* secured from General Quarters at 1:15 a.m.

On Christmas Eve, the ships were traveling in single file along a swept channel leading into Antwerp. At 11:15 a.m., 20-mm gunfire was heard coming from the leading ships in the convoy. By 11:20 a.m., the gunfire had intensified and lookouts reported hearing eight rounds from larger guns. The Farley again went to General Quarters, and all guns were prepared for firing. At 11:35, the Farley's lookouts spotted what they believed was the periscope and top of the conning tower of a midget submarine 2,000 yards off the starboard bow. The four 20-mm guns on the starboard side opened fire and hit the object, which appeared to submerge. It reappeared soon after, just aft of the starboard beam and at a range of 2,000 yards. The four 20-mm guns again fired on it, this time joined by the two larger guns. The three rounds fired from the 3-inch gun fell long, while the first two rounds from the 5inch gun fell short. The third 5-inch shell, however, fell directly in front of the target, once again forcing it to dive. Cease fire orders were given, and the ship emptied the rounds from the larger guns in an area deemed safe. General Quarters were secured at 12:15 p.m., but the *Farley* remained at Condition 2, in which the naval gunner stood watch four hours

on and four hours off for the remainder of the voyage.

The *George Farley* arrived at Antwerp at the height of the Battle of the Bulge. The surprise German counterattack through the Ardennes caught the Allies off guard, and German armor and troops easily pushed their way through American lines in an all-out, last-ditch effort to stall the Allied offensive. Seizing or destroying Antwerp, the large seaport through which most of the Allies' supplies and reinforcements were arriving, was one of the operation's prime objectives, and the Germans began pummeling the city with Hitler's so-called "vengeance weapons," the V-1 "buzz bomb" and the V-2 rocket, a precursor of the modern ballistic missile.

At 6:00 p.m. on Christmas Day, while the *Farley* continued up the Westerschelde to Antwerp, a series of V-1s passed over the Liberty. Three crashed and detonated within 600 yards of the ship. The weap-ons continued to fall after the *Farley* entered port on December 26. Over the next two weeks, V-1s and V-2s exploded around the harbor at the rate of one every 20 minutes.

It was an exceedingly difficult time for the men aboard the *George Farley*. Their ship was immobile alongside the wharf, and there was little they could do to defend themselves against the bombs. The V-1, a small, pilotless robot plane, could be heard a long distance off. Its ramjet engine gave off a loud, highpitched buzzing sound. A wartime saying had it that if you could hear the engine you were safe; it was when the engine cut out and the "buzz bomb" began its dive that one should take cover. V-1s were occasionally shot down by fast fighter aircraft, or by antiaircraft fire, but in among the warehouses and cranes of the port of Antwerp, the *Farley*'s gunners had little opportunity even to attempt to fight back against the V-1s.

Against the V-2 there was no defense at all. This weapon was in the form of a liquid-fueled rocket, topped with a ton of high explosive, which could be fired from any number of sites in northeastern Germany. The rocket traced a steep arc through the upper atmosphere, coming down on its target at a near-vertical angle. It traveled at supersonic speeds, so no one could hear it coming.

The crew and gunners of the *Farley* did what they could. In port, blackout regulations were

followed. Bilge and waste materials were emptied at night. The Armed Guard Commander, Lt.(jg) John P. Maguire, recommended that the 3"/50 caliber gun be equipped with open sights, which he felt were better suited to the conditions in the harbor. A response was received from the Commander of US Naval Forces, France, which stated that this would affect accuracy when firing the gun at longrange targets.

A combat alert had been issued by the Army for the period December 24, 1944, through January 1, 1945. The air raid alarm sounded 11 times, and a total of 454 V-bombs were logged while in port at Antwerp (Figure 25). Because of the combat alert, liberty for the men was restricted, and officers were forced to carry side arms when off the ship.

In addition to the continual threat from Vbombs, the port came under repeated attack by German aircraft. One air raid alarm was sounded December 26 at 10:00 p.m. The Armed Guard was at battle stations within one minute. The big guns were restricted from firing, so their crews were reassigned to the 20-mm guns. Three German planes were spotted flying over the city and dock area at a range of 3,000 yards. Bombs fell from the aircraft, without effect, and antiaircraft batteries began to fire on the planes. Smoke generators spread a haze of chemical smoke over the harbor, and General Quarters was secured by 10:30. However, at 11:00, the air raid alarms again sounded. A plane, identified as a

German Me110, a light, twinengine fighter/bomber, flew over the starboard bow of the George Farley and was shot at by shore batteries. Antiaircraft fire shot down a barrage balloon which landed about 50 yards off the starboard beam. A smoke screen again covered the dock area, and at 12:30 a.m. December 27 General Quarters was secured. The air raid siren was again heard December 29 at 7:30 p.m. and the men were at battle stations within minutes. Antiaircraft batteries began firing on four Me110s that were circling about 3,500 yards from the ship. No planes were hit. The planes had dropped bombs, but those fell wide of the ship. The "all clear" was sounded at 9:30 p.m.

Air attacks continued over the next week, with up to 40 aircraft attacking at one time. The raiders were Me110s, Messerschmidt Bf 109s and Focke-Wulf FW 190 fighters. The *George Farley* was not hit directly by bombs during this battle, but was affected by the sheer force of the blasts.

On January 8, 1945, a V-2 rocket bomb fell to earth only 60 yards ahead of the *Farley's* berth. The rocket struck in the midst of a group of longshoremen unloading the freighter *Blenheim*, secured to the pier just ahead of the Liberty Ship. The blast obliterated the loading crew, and severely damaged the *Blenheim*. Aboard the *Farley*, the concussion blew off the hatch covers, stunned the watch on deck, and shattered glass all over the ship, including the tiny light bulbs on the crews' life preservers. Torn metal, debris and human remains rained down on the *Farley*; a human head was discovered on the Liberty Ship's bridge after the blast. Lt. Maguire later guessed that a dozen men were killed in the blast; a more accurate count was impossible.

Maguire came away from the incident with very strong sentiments regarding the lack of training and preparation of his men before being sent into actions such as were occurring at Antwerp. More information was needed regarding proper procedures during air raids. The officer felt that the safest place for the gun crew was aboard ship, preferably

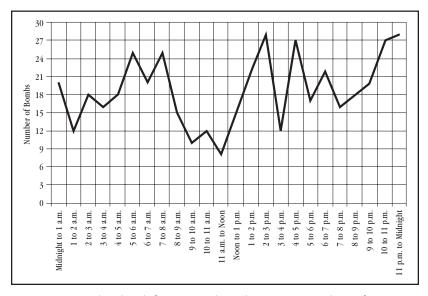


Figure 25. Hourly V-bomb frequencies logged at Antwerp, Belgium from December 25, 1944 to January 8, 1945.

below deck. Port holes and doors should be kept closed to lessen the effect of V-bombs should they explode nearby. He also found the air raid system confusing, and expressed irritation over the unpredictable status of barrage balloons. He also believed it was imperative that the 20-mm guns be ready for fire should the enemy slip through the air defense system. Finally, he was very concerned at the bad feelings between British and American troops. There was a good deal of hostility, Maguire noted, and the situation was made more dangerous by the fact that both sides carried guns.

After returning to New York, the ship took on general cargo and steamed for Cherbourg, France in an 82-ship convoy with four escorts on February 17, 1945. The voyage was routine. From France, she traveled to Southend, Scotland and then back to New York. She left New York again on May 28 for Antwerp. While anchored in the English Channel near Deal, England on the evening of June 11, 1945, the *George Farley* was rammed by the merchantman *Abraham Rosenberg* and the Number two 20-mm gun tub fell overboard. There were no injuries. The *George Farley* had not been blacked out, and was displaying running lights. She continued on to Antwerp, arriving on

June 20. She left Antwerp July 25 and arrived in Newport News, Virginia on August 8.

That fall the *Farley* returned to Europe, this time to Bremerhaven, Germany. She sailed from Bremerhaven on October 16, 1945, and returned to Norfolk, Virginia, arriving November 1. After loading a cargo of cork, she headed to Lisbon, Portugal. She sailed from Lisbon on December 29, 1945, and arrived in New York January 12, 1946. On February 17, 1945, her armed guard was detached.

Boland and Cornelius continued to operate the *George Farley* after her wartime service. The company rechartered her at New York in August 1946. In December 1946, she was chartered again to Boland and Cornelius at Galveston, and operated until January 1949 when Blidberg and Rothchild, her new operators, chartered her at New York again. The ship joined the Reserve Fleet at Wilmington, North Carolina, on November 14, 1949. The Grace Line chartered the ship in 1951, but she joined the Reserve Fleet at Beaumont in June 1952. The ship was purchased by the State of Texas in 1975 to be scuttled as part of the Artificial Fish Reef Program (Archeological Site No. 41WY145).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	Boston	Halifax	8/7/44	8/9/44
2	Halifax	Oban, U.K.	8/13/44	
3	Oban, U.K.	Glasgow, U.K.	9/20/44	10/23/44
4	Glasgow, U.K.	New York	10/29/44	
5	New York	Antwerp, Belgium	11/29/44	
6	Antwerp, Belgium	New York	1/8/45	
7	New York	Cherbourg, France	2/17/45	
8	Southend, U.K.	New York	4/27/45	
9	New York	Downs, U.K.	5/28/45	6/10/45
10	Downs, U.K.	Tilbury, U.K.	6/13/45	6/13/45
11	Tilbury, U.K.	Antwerp, Belgium	6/18/45	6/20/45
12	Antwerp, Belgium	Newport News, VA	7/25/45	8/8/45
13	Bremerhaven, Germany	Norfolk, VA	10/16/45	11/1/45
14	Lisbon, Portugal	New York	12/29/45	1/12/46

SS George L. Farley

SS V.A. Fogg (ex-SS Four Lakes)

Unlike most of the other ships included in this project, the *Four Lakes* was a T-2 tanker (Figure 26). She is included because her wreck is a popular site for sport divers and anglers, and because like the Liberty Ships, she was built under a wartime emergency construction program.

The Four Lakes was built by the Alabama Drydock and Shipping Co. of Mobile, Alabama, and was completed on January 26, 1944. As she neared completion, the tanker was fitted with her armament: a 5"/38 caliber dual-purpose gun on the stern for use against both aerial and surface targets, a 3"/50 caliber dual-purpose gun at the bow, and eight 20-mm antiaircraft guns positioned around her amidships and stern superstructures. To work the guns, the Four Lakes was assigned a Naval Armed Guard of 29 men. This number included an officer housed on the starboard side of the forward superstructure near the bridge, 25 gunners with bunk space divided between the superstructures, and three Navy signalmen, assigned a small cabin just aft of the tanker's bridge.

The *Four Lakes* was chartered to War Emergency Tankers, Inc., which in turn operated the tanker through the Atlantic Refining Company. She sailed from Mobile on the late afternoon of January 29, 1944, under the command of Elmer O. Wolfe, and arrived at Galveston, Texas just before midnight on the following day. She passed through Bolivar Roads and steamed up Galveston Bay to Baytown, where she took on a load of kerosene. She sailed from Baytown on the afternoon of February 3, and arrived without incident at New York at noon on February 9.

The *Four Lakes* offloaded her cargo of kerosene and on St. Valentine's Day 1944, sailed independently from New York for Baton Rouge, Louisiana. On the afternoon of February 16, while the tanker was about 320 statute miles east-southeast of Savannah, Georgia, the lookouts spotted what they believed to be a periscope. The crew went to General Quarters, and the Armed Guard fired two rounds from the 5-inch gun on the bow. The supposed periscope disappeared, and the remainder of the voyage passed without incident. The *Four Lakes* arrived at Baton Rouge late in the afternoon of February 21, and took on a cargo of gasoline. The tanker passed the mouth of the Mississippi on February 24, and continued on without escort to New York, arriving there before dawn on February 29.

At New York she joined a convoy of 28 other merchantmen and, on the afternoon of March 1, sailed in convoy for Liverpool. Six destroyer escorts accompanied the convoy. The tanker's first transatlantic crossing was mostly uneventful, although on the evening of March 9 the *Four Lakes*' lookouts reported tracers and heavy gunfire in the distance. The convoy continued on, and the *Four Lakes* passed the Liverpool Lightship on the morning of March 12, 1944.

The *Four Lakes* sailed in ballast from Liverpool on March 16. The orders given her master were that she would sail for some port in the United States. The convoy of 23 merchantmen and six escorts made the westbound crossing without incident. While en route, the *Four Lakes* was ordered to proceed to Philadelphia, and arrived there on the morning of March 28.

From Philadelphia the tanker was moved to New York. With a cargo of 80-octane gasoline, the *Four Lakes* joined an eastbound convoy of 26 merchantmen and sailed from New York on April 6, 1944. Early on the afternoon of April 16, at 53° 10' N, 18° 37' W, the convoy escorts depth-charged a suspected submarine contact. Forty-five minutes later, the

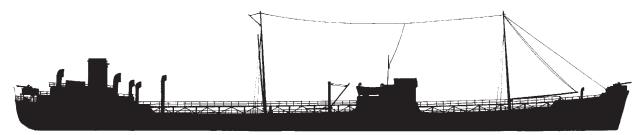


Figure 26. Sketch of a T-2 tanker (Talbot-Booth 1949: 201).

escorts made a second contact and depth-charged it. That evening at about 2,000 hours, another escort sighted a possible periscope and made more depthcharge runs over the contact. The convoy commodore passed the word that the escorts were prosecuting several U-boat contacts, and that Armed Guard crews were to keep a careful watch. The convoy continued on, however, and the *Four Lakes* passed in the Liverpool Lightship without further incident on the afternoon of April 18, 1944.

After offloading her cargo, the *Four Lakes* crossed the Irish Sea to Belfast, from which port she sailed on April 23 with 22 other merchantmen and six escorts for New York. On the evening of April 30, the escorts depth-charged a possible submarine contact, but otherwise there was no contact with the enemy. The *Four Lakes* arrived at New York on the evening of May 3.

The *Four Lakes* sailed again in convoy on May 12, carrying gasoline, kerosene and a load of aircraft on deck. Early the next morning, the 36 merchantmen and nine escorts which had sailed from New York were joined by a smaller contingent from Boston, bringing the combined convoy to a strength of 45 merchantmen and 13 escorts.

On the afternoon of May 16, the convoy sounded a general alarm and an escort vessel steamed quickly down between the columns of merchantmen flying a black signal pennant. A few minutes later, the convoy commodore raised a flag hoist ordering all ships in the convoy to make a simultaneous 30° turn to port. Once all ships in the convoy had acknowledged the signal, the hoist was hauled down and the convoy began its turn. The escorts were unable to make a firm contact, and after 20 minutes or so on the new course the convoy secured from General Quarters.

A similar incident occurred three days later. Shortly after noon on May 19, the convoy commodore ordered two turns to port, one of 30° and a second turn of 20° . Lookouts aboard the *Four Lakes* reported the escorts dropping depth charges on the starboard bow of the convoy. The escorts attacked another contact on the following day, May 20, on the starboard quarter of the convoy. The *Four Lakes* arrived at the Bar Lightship, at the entrance to the Mersey River, on the afternoon of May 23 and took on a pilot. The tanker arrived at her anchorage in the Mersey off Liverpool that same evening. The *Four Lakes* sailed in ballast from Liverpool on May 28, 1944, as part of an unescorted convoy. The following morning, in the North Channel, the Liverpool group was joined by additional escorted vessels from Belfast and Glasgow, making a combined westbound convoy of 50 merchantmen and six escorts. Early that evening, as the convoy entered the Atlantic, the lookouts reported hearing depth charges. The lookouts reported more gunfire and depth charges over the next half hour.

The next several days passed without incident. On June 4, the convoy was joined by a smaller escort carrier group. Three days later, just before 1:00 p.m., the lookout reported depth charges and one of the escorts ahead was seen to be flying a black signal pennant. The suspected submarine contact must have been very close ahead of the convoy, for only four minutes after the first depth charges exploded, the convoy commodore ordered a 45° emergency turn to starboard, followed by another 45° turn to starboard two minutes later. The convoy turned back to its original course a few minutes later and stood down from General Quarters, but throughout the rest of the afternoon there were more alerts, depth charge attacks and emergency course changes. The escorts' attacks were inconclusive.

The *Four Lakes* passed the Ambrose Lightship off New York just after midnight on June 9, 1944. She later dropped down the coast to Norfolk, Virginia, where she took on a cargo of gasoline, diesel fuel and aircraft. She sailed on July 1 in a convoy of 24 merchantmen and 10 escorts. The convoy steamed eastward for the Mediterranean without incident until the evening of July 9, when lookouts reported seeing two white flares ahead of the convoy. This was the signal that a ship had been torpedoed, and the Armed Guard of the *Four Lakes* went to General Quarters. There were no depth charges heard, though, and when no report of the supposed torpedoing came from the commodore, the Armed Guard dismissed after several tense minutes of waiting (both literally and figuratively) "in the dark."

The *Four Lakes* was routed to Casablanca, on the Moroccan coast, and with three other merchantmen departed the convoy late in the afternoon of July 11. The ships were escorted by three Free French warships. The tanker anchored at Casablanca early on July 12 and began discharging her part of her cargo. Two days later she was moved to a dock, where cranes were used to offload the aircraft she had carried as deck cargo. That evening, July 14, she sailed with one British and one Free French escort for Gibraltar. She arrived there shortly after noon the following day, and was tied up at the coaling wharf, where she discharged the remaining fuel cargo in her tanks. Port officials came aboard at 2:00 and immediately placed the ship under a 10day quarantine, keeping the crew from going ashore because their last port of call, Casablanca, was suspected to have active cases of bubonic plague.

The *Four Lakes* sailed alone on the evening of July 24, with water ballast in her tanks. In the Straits of Gibraltar she sighted her assigned westbound convoy. She joined up with the convoy shortly before midnight, bringing the strength of the convoy up to 16 merchantmen and eight escorts. The passage across the Atlantic was without incident, and on August 2 the convoy split into two sections bound for different ports. The *Four Lakes* was assigned to the New York section, and anchored in the harbor there on August 3, 1944.

The *Four Lakes* sailed again on August 11 for Great Britain. She was part of a convoy of 52 merchantmen and 14 escorts. She again carried diesel oil in her tanks and military aircraft on deck. The convoy was routed close to the Azores, and so was under Allied air protection for most of the way across the Atlantic. The escorts depth-charged several suspected submarine contacts, but without clear results. The convoy arrived at Swansea, in Wales, on August 22, 1944.

The *Four Lakes* returned to New York, and sailed again for Britain on September 12. She carried gasoline and miscellaneous deck cargo. The convoy of 44 merchantmen and 16 escorts steamed east at an average speed of 14 knots. On the afternoon of September 21, as the convoy neared the entrance to the Irish Sea, about a third of the merchantmen and half the escorts detached themselves from the convoy, reformed, and continued eastward for Cherbourg. The remaining vessels turned northward and continued on to Avonmouth, England, a small seaport near Bristol, arriving on September 22, 1944.

On September 26, she sailed in ballast to Milford Haven, where the routine briefing for the upcoming eastbound convoy was held the following day. The briefing customarily included both the masters and Armed Guard Officers of the merchantmen in the convoy. The notice for this particular conference, however, had been delivered with the line instructing Armed Guard Officers to attend marked through in red pencil. The officer commanding the Armed Guard aboard the Four Lakes, Lieutenant Joseph H. Elcock, Jr., USNR, went to the meeting anyway. Elcock was told that while Armed Guard officers were always welcome, they had not been asked to come since the conference dealt primarily with navigation, not gunnery, and also because the additional officers attending would put too much strain on the transportation available to take them from their ships to the conference and back. In his report of the incident, Elcock noted dryly that it was "rather late for an Armed Guard officer to have to establish his right to attend the masters' sailing conference."

The convoy passed without incident, and the Four Lakes arrived at New York on October 8. With the U-boat threat in the Atlantic decreasing steadily, an increasing amount of the Armed Guards' time was taken up in drills and training. But neither the Navy nor the shipping companies chartering the vessels provided the necessary resources to made this training effective. Lt. Elcock, for example, found that aboard the Four Lakes there was no quiet compartment available where he could conduct classes or give his men a place to study for examinations required for promotion to the next rate. He had to share his own cabin with another officer, and recommended that in the future Armed Guard officers be assigned their own cabins, which could double as classrooms for the gunners. Later Elcock complained about the lack of live-firing practice available for his men. On several Atlantic crossings in a row, the Four Lakes was assigned a position near the center of the convoy (standard practice with tankers and munitions vessels), and as a result her gunners were not allowed to fire their weapons for fear of striking another ship. Even when the Armed Guard could safely discharge its weapons, the Navy's ammunition allowance did not provide enough ammunition for regular, realistic practice. A full year's ammunition allowance for a 20-mm antiaircraft gun, Elcock pointed out, would be fired away in just 48 seconds.

At New York the *Four Lakes* took on a load of gasoline and deck cargo, and sailed in convoy for Naples, Italy, on October 14. The 16 merchantmen

from New York were joined the next day by four from Norfolk and one from Bermuda. The combined convoy, escorted by six warships, continued on the Straits of Gibraltar, after which it began shrinking steadily as merchantmen and escorts broke off to proceed to various ports. Four merchantmen continued on to Naples, arriving there on October 28. While in Naples, Armed Guard gunners received mail forwarded from the United States, the first time the ship had a "mail call" while in a foreign port.

She sailed again for New York on November 3, 1944, with five other merchantmen and three escorts. Off Gibraltar, the convoy was joined by 14 other merchantmen and four additional escorts. Three days out from Gibraltar, however, the Four Lakes began to lag behind the rest of the convoy. On at least two occasions the convoy had to reduce speed by several knots to allow the Four Lakes to regain her position. Lt. Elcock, in an attempt to give his gunners suitable spotting and sight-setting drill without having to fire actual ammunition, set up a miniature "shooting range" on a tabletop using a sheet of canvas and a model U-boat. The gunner in training would sight the U-boat through an inverted pair of binoculars, call out a range, spot simulated shell splashes, and gradually correct the range until he "sank" the target. The Four Lakes arrived in New York on November 17, 1944.

On November 23, 1944, under the command of C. E. Cather, she sailed in a convoy of 26 merchantmen and 10 escorts for Swansea, in Wales. She carried a cargo of high-octane aviation fuel. The convoy encountered heavy weather throughout the crossing, which made visual signaling between ships difficult and, on occasion, made it necessary for the Armed Guard gunners to abandon the 5-inch gun due to waves breaking over the bow. The convoy escorts made one possible contact with a U-boat during the forenoon watch on December 3, but were unable to maintain the contact. The convoy arrived safely at Swansea the following day.

She discharged her aviation fuel at Swansea, and sailed independently for Liverpool on December 5. That evening, just after midnight, a British Sunderland flying boat on patrol flew low over the ship, dropping red parachute flares as a recognition signal. At the time, the Four Lakes was taking on seawater ballast in her empty tanks, and as a result, a large volume of gasoline vapor was escaping from the tanks. In addition, several of the tanks which were being filled had already overflowed, spilling a quantity of residual gasoline on the deck. The flares from the Sunderland straddled the tanker, and two narrowly missed falling on the deck. The signalmen on the bridge tried to warn the airmen of the danger using a blinker light, but the Sunderland did not reply. At 2:00 a.m. the Sunderland appeared again, and began to make another low pass over the tanker dropping flares. This time the signalmen aimed the 12-inch blinker light, shutters open, directly on the plane. This time the flying boat veered off and, though it made several more passes over the tanker, did not drop any more flares.

The *Four Lakes* sailed from Liverpool in convoy on December 9, 1944, with 33 other merchantmen and eight escorts. The voyage passed uneventfully, and she arrived at Baltimore, Maryland on December 23.

After a refit and once again under the command of Elmer O. Wolfe, the *Four Lakes* sailed independently from New York on January 19, 1945 for Madras, India by way of the Suez Canal. She carried a cargo of 100octane fuel and 12 military airplanes on deck. The voyage passed without serious incident, although the tanker suffered a seven-hour breakdown on January 25 after some of her fuel oil became contaminated with water. After entering the Indian Ocean, the *Four Lakes* received two "SSS" warnings of enemy submarine along her projected course.³ In both cases the *Four Lakes* set a higher watch condition and altered her course to avoid the area. The *Four Lakes* arrived at Madras on February 20, 1945.

The *Four Lakes* discharged her cargo at Madras and on February 23 sailed for Calcutta, arriving on February 27. She sailed from Calcutta on March 4 for Abadan, Iran, at the northern end of the Persian Gulf. She arrived there on March 15, 1945, and took on a cargo of 80-octane gasoline. She sailed from Abadan on March 21, passed northward through the Suez Canal, and arrived at Naples, Italy on April 7. En route, the

³Several simple wireless codes were introduced during the war to alert Allied shipping to enemy action. In addition to the traditional "SOS," there was "SSS" to report an attack by enemy submarine, "RRR" to report an enemy surface raider, and "QQQ" to report a "Q-ship," a surface raider disguised as a merchant vessel (van der Vat, 1988).

Armed Guard Commander, Lt. Elcock, used kites as simulated targets for his antiaircraft gunners.

After a two-day stopover in Naples, the Four Lakes sailed independently in ballast for Gibraltar, where she would receive further orders routing her to Aruba in the Caribbean. Off Gibraltar, Capt. Wolfe signaled the port authorities of his orders and asked for his routing instructions to Aruba. The port authorities complied willingly, but also revealed that they had not been notified to expect the arrival of the tanker. The Four Lakes continued on, but on April 15 received new orders to proceed to New York. On that same day, the ship held a brief memorial service for President Roosevelt, who had died at Warm Springs, Georgia, on April 12. On the morning of April 21, the Four Lakes encountered the Canadian corvette HMCS Douvan, which inquired as to the tanker's name. In keeping with security precautions, Capt. Wolfe politely refused but offered to reply to the current naval recognition challenge. No challenge was forthcoming, and after several interchanges the master had the Four Lakes' international call sign flashed to the corvette. The remainder of the voyage passed uneventfully, and the tanker arrived at New York on April 23, 1945.

Immediately upon her arrival, the *Four Lakes* was loaded with 80-octane gasoline and assigned to a convoy sailing the following day, April 24. The speed of the ship's turnaround was remarkable, but it created a potentially far more serious problem. The ship's civilian crew had been away from the United States for more than three months, and when they learned that they would have no liberty at all in New York, over 90% of them collected their pay and signed off the ship. As a result, the *Four Lakes* sailed with a new crew who had only been aboard a few hours. On the second day at sea, the tanker suffered a mechanical breakdown which officers traced directly back to a new crewman inexperienced on the ship's turboelectric drive.

The incident also pointed up the differences between the civilian seamen who ran the ship and the naval personnel who manned the guns. Merchant seamen signed on by the voyage; the Navy gunners were in for the duration of the war, with little opportunity even for transfer to another branch of the service. The gunners did not have the option of "signing off" their ship, and this, combined with the inequities of pay, working hours and benefits, often strained relations between civilian seamen and naval gunners.

The 50 merchantmen and 10 escorts crossed the Atlantic without difficulty, but upon entering the English Channel the convoy encountered poor visibility. Between 8:30 a.m. on May 3 and 10:18 p.m. the following day, the convoy made 26 emergency turns to port and starboard as the escorts reported submarine contacts and gunfire flashes. The convoy finally anchored in the Thames below London on May 5, 1945. Two days later, the Germans surrendered unconditionally to the Allies.

The *Four Lakes* sailed from Southend, London, on May 8 in ballast. She was part of a 38-ship convoy, with a escort of eight warships. While passing south and west through the English Channel, the convoy encountered floating mines and more suspicious underwater contacts. Though the end of hostilities in Europe had been officially announced, the convoy maintained its normal wartime routine. The convoy arrived in New York safely on May 19, 1945.

After a long-overdue refit, the *Four Lakes* sailed again on June 4, 1945, with a cargo of 100-octane gasoline and P-51 fighters as deck cargo, for Madras, India. Her new master was James R. McWilliams,⁴ and Lieutenant (jg) Paul L. O'Toole, USNR had assumed command of the Armed Guard. She sailed independently without zigzagging and burned running lights at night. Lt. O'Toole got permission to test-fire his guns, shooting off five rounds each from the 3-inch and 5-inch guns, and 60 rounds from each of the 20-mm antiaircraft guns. The *Four Lakes* arrived at Madras, India, on the Fourth of July, 1945.

The *Four Lakes* then steamed west and north into the Persian Gulf, taking on a load of diesel oil at Abadan, Iran. She sailed from Iran on July 24, 1945, and proceeded independently to Darwin, Australia. At Darwin she joined two other merchantmen, and escorted by three warships, steamed north to the Philippines. She arrived at Manila on August 22, 1945.

⁴The first reference to McWilliams, in the Armed Guard Commander's report of July 4, 1945, refers to him as *John C*. McWilliams.

In September, the *Four Lakes* steamed eastward across the Pacific. In late October, the *Four Lakes* carried a load of diesel fuel from the Panama Canal Zone to San Pedro, California. She departed Los Angeles on November 2, 1945 in ballast, passed through the Panama Canal, and continued on to Houston, Texas, arriving on November 19. In December, she carried a cargo of bulk oil from Hamburg, Germany to an undetermined destination.

In February 1946, the *Four Lakes* was rechartered to the American Petroleum Transport Corporation. In July 1946, she carried a cargo of bulk oil from Texas City, Texas to Baltimore, Maryland. Shortly thereafter, she was placed in the Reserve Fleet at Mobile, Alabama. She was chartered again to the American Petroleum Transport Corp. in 1947, and in 1948 was sold to a new company, Tanker Four Lakes, Inc. In 1959, the ship was enlarged, adding 50 feet to her length.

The *Four Lakes* was renamed *V.A. Fogg* on August 11, 1971. About this same time, the vessel was sold to Texas City Tankers, Inc. On February 1, 1972, the *Fogg* sailed from Freeport, Texas, into the Gulf of Mexico. She had recently offloaded a cargo of benzene, a highly volatile hydrocarbon, and was heading to a point 50 miles offshore to clean the tanks. She also carried a load of xylene. Something touched off a spark which ignited benzene fumes and then the volatile cargo. Sixteen of 18 wing tanks and at least two of nine center tanks blew. Steaming ahead at full speed, the ship sank like a rock. The explosion ripped apart the ship's hull plating midway between the midships and after superstructures, almost completely splitting the vessel in two (Figure 27). All 39 men aboard were killed. The tanker quickly settled in 100 feet of water at $28^{\circ} 35' N, 94^{\circ} 48' W$ (NTSB 1974).

There was no time for the ship to send a distress call, and for several days the disappearance of the tanker was a mystery. A search team found one of the vessel's life rafts on February 8, but noted that there was no evidence that anyone had been in it. Investigators theorized that the raft was released automatically when the ship sank. The wreck was located soon after, and on February 13 divers positively identified what remained of the vessel. Five bodies, including that of Capt. John E. Christy, were recovered (*Galveston Daily News* 1972).

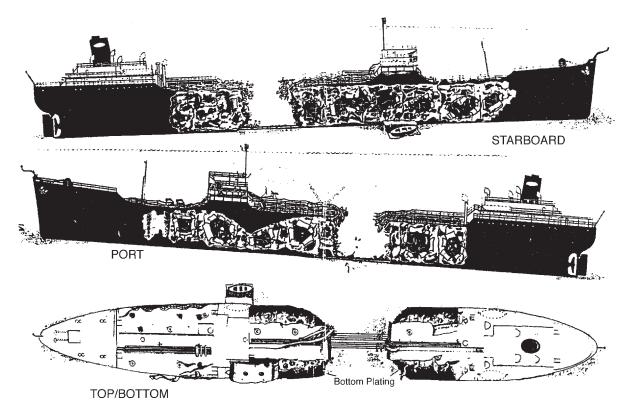


Figure 27. Explosion damage to the V.A. Fogg from the USCG accident report.

The sudden, violent end of the *Fogg*, and the mystery surrounding her disappearance, have given the wreck a certain notoriety. The wreck lies relatively close to shore, and in shallow enough water that it has become a popular site for sport divers. Fittings and other objects found drifting after the disaster along

with those removed from the wreck itself by divers can be found in many shops, restaurants and private homes along the Upper Texas Coast. The *William H. Allen* and the *B.F. Shaw* later joined the *Fogg* as the site became part of the Artificial Reef Program (Archeological Site No. 41GV136).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	Mobile, AL (maiden voyage)	Galveston, TX	1/29/44	1/30/44
2	Galveston & Bay Town	New York	2/3/44	2/9/44
3	New York	Baton Rouge, LA	2/14/44	2/21/44
4	Baton Rouge	New York	2/24/44	2/29/44
5	New York	Liverpool, England	3/1/44	3/12/44
6	Liverpool	Philadelphia, PA	3/16/44	3/28/44
7	New York	Liverpool	4/6/44	4/18/44
8	Belfast, Ireland	New York	4/23/44	5/2/44
9	New York	Liverpool	5/12/44	5/23/44
10	Liverpool	New York	5/28/44	6/9/44
11	Norfolk, VA	Gibraltar	7/1/44	7/15/44
12	Gibraltar	New York	7/24/44	8/3/44
13	New York	Swansea, Wales	8/11/44	8/22/44
14	New York	Avonmouth, England	9/12/44	9/22/44
15	Avonmouth	New York	9/26/44	10/8/44
16	New York	Naples, Italy	10/14/44	10/28/44
17	Naples	New York	11/3/44	11/17/44
18	New York	Swansea	11/23/44	12/4/44
19	Liverpool	Baltimore, MD	12/9/44	12/23/44
20	New York	Madras, India	1/19/45	2/20/45
21	Madras	Naples	2/23/45	4/7/45
22	Naples	New York	4/9/45	4/23/45
23	New York	London	4/24/45	5/5/45
24	Southend, England	New York	5/8/45	5/19/45
25	New York	Madras	6/4/45	7/4/45
26	Abadan, Iran	Manila, PI	7/24/45	8/22/45
27	Canal Zone	San Pedro, CA	10/15/45	10/28/45
28	Los Angeles, CA	Houston, TX	11/2/45	11/19/45
29	Hamburg, Germany		12/6/45	
30	Texas City, TX	Baltimore	7/1/46	7/13/46

SS V.A. Fogg (ex-SS Four Lakes)

SS Rachel Jackson

Named for President Andrew Jackson's wife, the *Rachel Jackson* was completed by the California Shipbuilding Corporation in Los Angeles on March 19, 1943. A few days later shipyard workers mounted nine 20-mm antiaircraft guns and a single, 3"/50 caliber dual-purpose gun. Later, one of the 20-mm guns was replaced with a second 3-inch gun. The ship was chartered by the War Shipping Administration to the Black Diamond Steamship Company.

The Jackson moved up the coast of California to San Francisco, where she took on general cargo, and sailed independently for Sydney, Australia on April 6, 1943. It was an eventful voyage. On the tenth evening out, south of the equator, lookouts aboard the Jackson spotted an angular shape about 2,000 yards off the starboard beam. The Liberty went to General Quarters, and while the naval gunners tried to train their 3-inch gun on the target, it appeared to submerge. A few minutes later, a torpedo track was reported heading for the ship, but the Jackson's forward motion carried the ship past the point of impact and the torpedo passed a scant 20 yards astern. The submarine surfaced again on the starboard beam, and the Armed Guard opened fire. The second 3-inch shot hit the conning tower and exploded, after which the submarine submerged and was not seen again. The officer commanding the Naval Armed Guard, Lt. (jg) Marion Kenneth Vickery, USNR, reported that his men's good shooting had "resulted in at least the badly damaging of said vessel."

From Sydney, the Jackson continued on in convoy to Milne Bay, New Guinea. She later returned to Australia, and on October 13, 1943 set out on a return voyage to the US. Despite the Armed Guard's success in defeating a submarine attack on the outward voyage, however, tensions between naval and merchant marine personnel ran very high during the remainder of the eight-month voyage. The Rachel Jackson must have been a very unhappy ship. Upon the Liberty's return to the US, in mid-November 1943, Lt. Vickery filed a detailed and scathing report, accusing the captain of breaches of wartime regulations and citing several occasions where the master's actions placed the ship and her personnel in serious danger. According to Vickery, the master would not allow the Armed Guard to hold General Quarters drills unless the civilian crew was notified in advance, so that they would not have

to "turn to" themselves. When some of the Armed Guard gunners were ill and Vickery assigned his two naval signalmen to stand lookout watches temporarily, the captain dressed him down for making the assignment without his permission. The master refused to move cargo booms and other obstructions in the gunners' arc of fire, and left the life raft assigned to the Armed Guard (the civilian crew were assigned to lifeboats) on deck during part of the voyage, from which position it could not be launched in an emergency. Finally, and perhaps most important, the master refused to share with the naval officer reports of submarine sightings in the area.

Vickery's allegations were taken very seriously, and G. W. D. Dashiell, Port Director for the Naval Transportation Service at San Pedro, interviewed the captain at length about the naval officer's charges. Dashiell later reported that the master denied some of Vickery's allegations, but partially admitted some others. The port director observed the master carefully during the interview, and concluded that most of Vickery's complaints were probably justified. Dashiell also noted that he "has a distinct foreign accent that appears to be Germanic," and that the master's name had been added to the Merchant Marine Suspect List as of September 1, 1943. Lastly, Dashiell observed that while "there is nothing definite to indicate that he is Pro-Nazi... it appears that he has Nazi sympathies and is antagonistic toward Russia."

Dashiell's report is interesting, in that it gives some indication of the way wartime suspicions and prejudices found their way into official correspondence. While it appears from the available evidence that the captain was careless and arbitrary in handling his ship, and that (in the words of Lt. Vickery) he did not "really understand the connection between the Navy gun crew and his merchant seamen," there is no evidence that this stemmed from any ulterior motives. During wartime, though, suspicion alone was often enough. Though the final outcome of Vickery's charges and subsequent investigation are not recorded, it is quite possible that the captain found himself removed from command of the *Jackson* as a result.

The *Jackson* sailed again from San Pedro on November 30, 1943. With a cargo of general material and aircraft consigned to the Army, she steamed alone southwest across the Pacific. After an overnight stop at Hobart, Tasmania on December 30-31, she continued west and north into the Indian Ocean and arrived at Karachi, India (now Pakistan) on January 25, 1944. She off-loaded at Karachi and, taking on a combined load of general cargo and explosives, she sailed to Bombay, where she joined a small convoy and continued on to Colombo and Calcutta, arriving on February 23.

At Calcutta the *Jackson* loaded a cargo of varied items and steamed in convoy to Suez, Egypt, at the southern end of the Suez Canal. While there, early on the morning of April 10, 1944, one of the *Jackson*'s boilers exploded. She managed to pass through the canal to Port Said, but was delayed there for the next month due to a lack of repair facilities.

On May 14, the *Jackson* sailed eastward in an 80-ship convoy. The Liberty was unable to keep up with the other ships, though, due to an accumulation of marine growth on the ship's bottom, and was instructed to put into Casablanca. She arrived at the Moroccan port on May 26. She joined a second convoy at Casablanca, and sailed on June 4 for New York. The 62 merchantmen and 12 escorts crossed the Atlantic without incident, and arrived at New York on June 19, 1944.

With a load of general cargo, the Rachel Jackson sailed again on July 11. She steamed in a convoy of 21 merchantmen and seven escorts for Norfolk, Virginia, where they rendezvoused with a larger contingent of ships bound for the Mediterranean. The full convoy, with 72 merchantmen and 13 escorts, sailed on July 14. The track across the Atlantic was uneventful, and the convoy passed through the Strait of Gibraltar on July 29. After entering the Mediterranean, merchantmen and escorts began breaking off and joining the convoy at regular intervals. Three days after entering the Mediterranean, the convoy fired on aircraft passing over the convoy at night. Early on the morning of August 5, just after midnight, a lookout reported seeing flares and antiaircraft fire coming from ships on the left flank of the convoy. The Jackson went to General Quarters, and radio operators aboard the Liberty heard distress calls from ship number 15, the fifth vessel in the first column of the convoy. An enemy plane, believed to be a Junkers Ju-88 medium bomber, approached the Rachel Jackson from aft of the starboard beam. The Armed Guard gunners opened fire when the plane was 750 to 1,000 yards

from the ship. The plane banked sharply right, passed along the starboard side of the *Jackson* and disappeared into a smoke screen being laid by other ships in the convoy. The gunners could not confirm damage to the bomber, but were certain they saw tracer fire from the *Jackson's* 20-mm guns going into the aircraft. The convoy continued on without further incident, and arrived at Alexandria, Egypt two days later.

At Alexandria, she took on a load of British motor transport vehicles, troops and ammunition. These were consigned to be shipped to Italy, where the British 8th Army was busy fighting its way northward up the peninsula. On August 28, she sailed in convoy with 15 other merchantmen and five escorts. Off Malta, nine merchantmen left the convoy, which continued on to Augusta, Sicily. She sailed from Augusta in convoy with 25 merchantmen and three escorts. The *Rachel Jackson*, together with eight other merchantmen, departed the convoy shortly thereafter and steamed into the harbor at Taranto, Italy, arriving late on the afternoon of September 5, 1944.

At Taranto, the *Jackson* unloaded her cargo of military vehicles and took aboard a similar cargo, along with 54 military personnel as passengers. She sailed in convoy for Augusta on September 10. From Augusta she continued in convoy to Malta, and from Malta to Algiers in North Africa, where she arrived on September 20. She unloaded her cargo and took aboard more general cargo and military transport vehicles destined for Italy. She sailed on October 1 in convoy to Malta, and from there proceeded in convoy to Naples, arriving on October 7, 1944.

She sailed independently, in ballast, for Cagliari, Sardinia on October 15. At Cagliari, she loaded more supplies, ammunition and military vehicles and returned in convoy to Naples. Both at Cagliari and Naples, the crew experienced considerable frustration at the length of time it took to unload the *Jackson*, due to the lack of dockside transportation facilities and the inexperience of "native labor in discharging cargo." After unloading her cargo, she sailed in convoy to Oran, Algiers, where she joined a larger convoy headed west across the Atlantic. With 97 other merchantmen, one destroyer and seven destroyer escorts, she sailed on December 3. The westbound crossing passed without incident and, after detaching several vessels for Bermuda, the convoy arrived safely at Charleston, South Carolina on December 21, 1944.

The *Rachel Jackson* returned to the Mediterranean, and in mid-February at Marseilles loaded a cargo of lumber, personnel and equipment consigned to the Army. She sailed on February 14, 1945 for Naples. Shortly after clearing the harbor at Marseilles, the *Jackson*'s lookouts spotted a floating mine. The Armed Guard opened fire on it with one of the Liberty's 3-inch guns, but were unable to detonate the device. The *Jackson* radioed the location to the port director at Marseilles and continued on to Naples, arriving there on February 16.

At Naples the *Jackson* loaded a cargo of Canadian military vehicles and personnel. She returned to Marseilles, arriving on March 2, 1945. Again she took on a cargo of flatting lumber destined for Naples. She arrived at Naples on March 6, but the berth assigned her was too short and shallow for the *Jackson* to enter fully loaded. The crew of the *Jackson* was forced to lie in the anchorage and unload cargo into barges until the Liberty was lightened enough to fit her assigned berth.

Over the following month, the Rachel Jackson made three more round trips between Naples and Marseilles, carrying military vehicles, personnel and general cargo. She sailed in small convoys eastbound, but each time returned to Naples independently. On April 9, the Jackson sailed alone to Oran, where she joined a westbound convoy of 43 other merchantmen and five escorts. The convoy sailed on April 12, crossed the Atlantic without incident, and arrived at San Juan, Puerto Rico on April 29, 1945. The Jackson continued independently to Guantanamo, Cuba, where she arrived on May 11. At Guantanamo she joined a large northbound convoy, which sailed on May 13 for New York. Two days out from Cuba, the convoy received orders to disperse and for all ships to proceed to their destinations independently. With the war in Europe almost over, collision at sea seemed a more likely threat than U-boats, and the merchantmen were allowed to use their running lights again. The *Jackson* arrived in New York about May 19, 1945.

The War Shipping Administration lost no time in transferring the Rachel Jackson to the Pacific. Loaded with a cargo of supplies and equipment consigned to the Army, she passed through the Panama Canal into the Pacific in August 1945 and on the 28th of that month sailed independently for the Philippines. She arrived at Tacloban on October 3, and three days later sailed for Okinawa. The Jackson arrived at Okinawa on October 14. On October 27, she sailed for Japan, arriving at Wakayama, on November 1. She departed Wakayama for the US on November 16, and the following day, in accordance with orders, dropped her remaining ammunition overboard. En route, the Naval Armed Guard readied the Jackson's guns and naval equipment for removal. She arrived at the Panama Canal on December 20, 1945, passed through the canal, and arrived at Philadelphia about December 28, 1945. The Jackson's last voyage under wartime command was the one-day trip from Cape May, New Jersey, to Norfolk, Virginia. She anchored in Hampton Roads, Virginia, on January 8, 1946. The last commanding officer of her Naval Armed Guard was Seaman 1st Class Harry William Butler, USNR.

The *Jackson's* guns were removed by February 1, 1946, and the following August she joined the National Defense Reserve Fleet in the James River, Virginia. She returned to service briefly in late 1951, when she was chartered by the New York and Cuba Mail Steamship Company. The *Jackson* returned to the Reserve Fleet, this time at Beaumont, in June 1952. She remained at anchor in the Sabine until July 29, 1975, when she was purchased by the State of Texas for the Artificial Fish Reef Program (Archeological Site No. 41NU279).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	San Francisco	Sydney, Australia	4/6/43	5/1/43
2	Calcutta, India	Casa Blanca	3/4/44	5/27/44
3	Casa Blanca	New York	6/4/44	6/7/44

SS Rachel Jackson

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
4	New York	Alexandria, Egypt	7/11/44	8/7/44
5	Alexandria	Taranto, Italy	8/28/44	9/5/44
6	Taranto	Algiers, Algeria	9/10/44	9/20/44
7	Algiers	Augusta, Sicily	10/1/44	10/5/44
8	Augusta	Naples, Italy	10/6/44	10/7/44
9	Naples	Cagliari, Sardinia	10/15/44	10/16/44
10	Cagliari	Naples	11/1/44	11/2/44
11	Naples	Oran, Algeria	11/26/44	11/30/44
12	Oran	Charleston, SC	12/3/44	12/21/44
13	Marseilles, France	Naples	2/14/45	2/16/45
14	Naples	Marseilles	2/28/45	3/2/45
15	Marseilles	Naples	3/4/45	3/6/45
16	Naples	Marseilles	3/12/45	3/14/45
17	Marseilles	Naples	3/15/45	3/17/45
18	Naples	Marseilles	3/21/45	3/23/45
19	Marseilles	Naples	3/24/45	3/26/45
20	Naples	Marseilles	4/3/45	4/5/45
21	Marseilles	Oran	4/9/45	4/11/45
22	Oran	San Juan, P.R.	4/12/45	4/29/45
23	San Juan	Aguirre, P.R.	4/30/45	5/1/45
24	Aguirre	Guayanilla	5/6/45	5/6/45
25	Guayanilla	Guantanamo, Cuba	5/9/45	5/11/45
26	Guantanamo		5/13/45	
27	Canal Zone, Panama	Tacloban, P.I.	8/28/45	10/3/45
28	Tacloban	Okinawa	10/6/45	10/14/45
29	Okinawa	Wakayama, Japan	10/27/45	11/1/45
30	Wakayama	Canal Zone	11/16/45	12/20/45
31	Canal Zone		12/20/45	
32	Cape May, NJ	Norfolk, VA	1/8/46	1/8/46

SS Dwight L. Moody

Dwight L. Moody was a non-denominational religious revivalist in the 19th century, who was very popular in both England and America. The Liberty Ship named for him was completed by the J. A. Jones Construction Co. in Panama City, Florida on July 24, 1943. That same day her official owners, the US Maritime Commission, chartered her to the Lykes Brothers Steamship Company. The company, more popularly known as "Lykes Lines" for the bold lettering carried along its ships' hulls in peacetime, had been founded in Galveston early in the 20th century. Lykes Lines expanded quickly in the 1920s and 1930s, and either owned or chartered many vessels during World War II.

The Navy's Bureau of Ordnance originally equipped the freighter with a single 3"/50 caliber gun, intended for use against both airborne and surface targets, and nine 20-mm antiaircraft weapons. Later one 20-mm gun was removed and replaced with a second 3-inch gun.

Dwight L. Moody's first wartime voyage was a short round trip from Florida to Puerto Rico to Guantanamo Bay, Cuba, and back to Florida. In September, loaded with a cargo of sugar, she sailed from Key West to New York, where she joined 37 other merchant ships in convoy to Great Britain. With four escorts (later increased to eight), the convoy sailed on September 28, 1943, and arrived at Loch Ewe, Scotland on October 12. She left the same day in another convoy that took her around the coast of Scotland to Methil, and from there to London, where she arrived on the afternoon of October 17.

While in London, the *Moody's* crew discovered that local regulations had a dramatic impact on their personal comfort. Probably in an effort to limit the amount of sewage dumped into the Thames – one of the world's most historic and dirtiest rivers – crews of vessels at the Port of London were required to go ashore to relieve themselves. The washrooms, or "heads," aboard ship were padlocked. It is not clear whether the *Moody's* crew used the shore side facilities or found some other surreptitious answer to the problem.

At Tilbury, near London, *Dwight L. Moody* off loaded her cargo of sugar and took on ballast for the return trip to across the Atlantic. Again in convoy, she retraced her course around the east coast of Britain to Loch Ewe. She sailed on November 13, 1943 in a convoy of about 45 vessels, with eight escorts, and after a mostly uneventful trip arrived at St. John, New Brunswick on November 28.

The commander of the *Moody's* Naval Armed Guard, Lieutenant David Marx, USNR, discovered on the eastbound passage that sometimes a ship's safety was considered secondary to her profit margin. The dispute involved the use of torpedo nets, curtains of thin wire mesh that were suspended out to the side of the ship from booms. The idea of the nets, which were normally used to protect anchored vessels, was that they would explode an incoming torpedo before it reached the hull. The *Moody's* crew deployed the ship's torpedo nets while en route to Canada, on November 17, and hauled them in again the following day when the seas became rough. Marx suggested to the *Moody's* master on several other occasions that it might be appropriate to use the nets. The master refused, citing the difficulty of rigging the nets and that the extra work would make it necessary for the steamship company to pay overtime wages to the civilian crew. It is not difficult to imagine the reaction to this argument of the Navy gun crew, to whom profits mattered little and overtime wages were but a peacetime memory.

After taking on a load of general cargo, the *Moody* steamed to Halifax, where she joined a 52-ship eastbound convoy. The convoy sailed on December 17, 1943, under escort of seven naval vessels, and arrived in Liverpool on December 30. On January 2, 1944, the *Moody* proceeded alone to Manchester, where she unloaded her cargo. She returned to Liverpool in ballast a few days later and joined a large westbound convoy. The convoy sailed on January 24, but ran into heavy seas on the route back. On the evening of January 31, the *Moody* ran into seas so heavy that she was forced to break away from the convoy. The following afternoon she was able to get underway again, and steamed alone to Halifax, where she arrived on February 8, 1944.

The *Moody* probably made at least one more round trip to Europe that spring. In June she was in the Mediterranean, carrying cargoes to support the Allies' steady advances in Italy. She carried a cargo of coal from Naples to Palermo, Sicily, and in July carried a cargo of Army vehicles and scrap metal from Italy to Bizerte, French North Africa (now Tunisia). On July 20, 1944, still loaded with the trucks and scrap metal, the *Moody* sailed from Bizerte in convoy with approximately 50 other ships for New York.

Up to this point, the *Dwight L. Moody's* career had been relatively peaceful. On her next eastbound trip, however, that was to change. She sailed from New York on August 25 in a convoy of 73 merchant ships, 5 escort vessels and 4 MAC (Merchant Aircraft Carrier) ships. Three days later the convoy rendezvoused with a second group of ships, probably from Halifax, consisting of 33 merchant ships and an unknown number of escorts. The combined convoy continued north and east for several days. At 0455 on the morning of September 8, however, when the convoy was just off the Irish coast, two ships on the port beam of the convoy were torpedoed. The men aboard the *Dwight L. Moody* heard four or five explosions; no one was sure of the exact number. One ship, believed to be the *Leif Ericson*, burst into flames and sank within three minutes of the initial explosion. A second ship, believed to be a Liberty, was also hit. The escorts began dropping depth charges, and the officers and crew of the *Moody* continued to hear the frequent rumble of depth charges until 1030 that morning. The convoy sailed on, arriving at Manchester on September 10.

She sailed for New York again on September 15 with 1,500 tons of ballast in her holds. There were no successful attacks on the convoy, but the escorts kept busy dropping depth charges on suspicious contacts on the port (south) side of the convoy. The convoy did not zig-zag. The weather was mostly clear, but the seas were often very heavy. The *Moody* rolled badly, and shipped green water over the bulwarks frequently. It was impossible to man the guns forward of the superstructure in a heavy sea. But the rolling was not only uncomfortable, it also put the vessel in serious danger of foundering. The ballast provided was too light – the ship's officer thought 2,000 tons more adequate – and tended to shift dangerously in heavy seas. The practice at the time was to use some loose material such as slag for ballast, as this could be removed quickly when the ship reached port. But, as the new officer in charge of the Naval Armed Guard, Lieutenant Sidney T. Feinberg, pointed out, the ship was not fitted with adequate baffles inside the holds to prevent the ballast from shifting when the ship rolled. If a ship rolled heavily to one side repeatedly, the ballast could gradually shift to that side, giving the ship a dangerous list. If the rolling continued, the ship would roll farther and farther to one side until she finally capsized (Figure 28).

The *Moody* arrived at New York safely on October 5, 1944. She dropped down to Norfolk, Virginia, where she took on a cargo of general merchandise, and on October 21 sailed in convoy for Marseilles, France. A few days later it was discovered that the forward ammunition magazine, directly under the 3-inch gun tub on the bow, had flooded with sea water. The magazine was pumped dry and the ammunition removed, dried and greased. Much of the ammunition was found to be badly damaged, however, and on October 31 the explosives were dropped overboard. The 61-ship

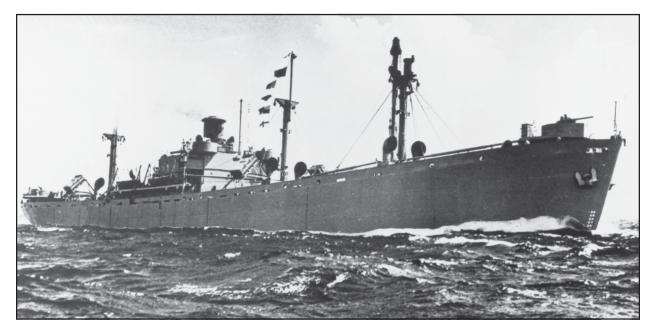


Figure 28. A Liberty Ship pitches in rough seas, North Atlantic, December 1943. A number of ships broke apart in such conditions, giving the type a bad reputation among merchant seamen. The danger was increased by the use of welded construction, which allowed a crack to spread from one plate to the next, and the common practice of ballasting the vessels too lightly (Imperial War Museum).

convoy arrived in France on November 16 after an otherwise uneventful passage.

From France the *Moody* crossed the Mediterranean independently to Oran, where she joined a large eastbound convoy. The 80 merchant vessels and seven escorts sailed for Bermuda on December 13, 1944. Once again the lack of sufficient ballast caused the ship to pitch and roll heavily. From Bermuda, the *Moody* sailed on alone to New Orleans, where she arrived in mid-January 1945.

The *Dwight L. Moody* sailed independently from New Orleans on January 25 for the Panama Canal with general cargo consigned to the Army. She passed through the canal around the first day of February 1945, and continued alone across the Pacific. She arrived at Eniwetok on March 2, and proceeded from there to Manus with one other merchantman and a single escort. From Manus she sailed alone to Hollandia, on the north coast of New Guinea, and from there in a 28-ship convoy to San Fabian (Philippines), arriving on the morning of March 26, 1945. There appears to have been some concern over the quality of the consumables during the long voyage, since the naval officer commanding the Armed Guard recommended that Navy doctors be required to inspect the food aboard merchant ships carrying naval gun crews.

The *Dwight L. Moody* sailed for Hollandia on April 10 with a load of Army cargo and in a convoy of 46 merchantmen and three escorts. From Hollandia, she sailed alone to Cairns and Biak, where she arrived on May 14, 1945. She joined a small convoy to Morotai, and there joined a larger convoy for Brunei, arriving on June 11. Three nights later, at 9 p.m., a single Japanese medium bomber, known as a "Betty" to the Allies, overflew the anchorage at Brunei and dropped a single bomb about a mile away from the *Moody*. The Liberty Ship's gun crews opened fire with the 20-mm guns, as did other ships in the anchorage. The bomber was hit and crashed, but gunners from another ship got credit for the "kill."

From Brunei, the *Dwight L. Moody* sailed in convoy for Morotai, arriving on June 30, 1945. From there she sailed alone to Mios Woendi, Hollandia, Manus and, finally, Panama. She passed through the Panama Canal eastbound on August 27 or 28, and steamed for New York. On the route back to the US, the lieutenant in charge of the gun crew, James A. Page, tried to keep up the wartime routine of regular gun drills, but the war was effectively over, and the ship's civilian crew had little incentive to participate. Page noted dryly that "not much cooperation was received from the merchant marines." She arrived at New York on September 5, 1945.

The *Moody* had her armament removed in late 1945, and the following spring was transferred to the Reserve Fleet at Lee Hall, Virginia. She remained "in mothballs" for nearly a year, but was again chartered to Lykes Lines in April 1947. Her charter was transferred to the Mississippi Shipping Company on January 13, 1950, and 10 days later she was again placed in reserve at Beaumont, Texas. In May 1951 she was chartered to the Moore-McCormick Line, possibly for transport duty during the Korean War, but returned again to the Beaumont Reserve Fleet in June 1952. On July 1, 1975, the *Dwight L. Moody* was purchased by the State of Texas for the Artificial Fish Reef Program (Archeological Site No. 41MG83).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	San Juan, Puerto Rico	Ponce, P.R.	8/29/43	8/30/43
2	Ponce	Jobos, P.R.	9/3/43	9/3/43
3	Jobos	Mayaguez, P.R.	9/6/43	9/7/43
4	Mayaguez	Guantanamo Bay, Cuba	9/9/43	9/11/43
5	Guantanamo Bay	Key West, FL	9/12/43	9/15/43
6	Key West	New York	9/16/43	9/22/43
7	New York	Loch Ewe, Scotland	9/28/43	10/12/43

SS Dwight L. Moody

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
8	Loch Ewe	Methil, Scotland	10/12/43	10/14/43
9	Methil	London, England	10/14/43	10/17/43
10	London	Methil	11/6/43	11/9/43
11	Methil	Loch Ewe	11/11/43	11/12/43
12	Loch Ewe	St. John, New Brunswick	11/13/43	11/28/43
13	St. John	Halifax, Nova Scotia	12/15/43	12/17/43
14	Halifax	Liverpool, England	12/17/43	12/30/43
15	Liverpool	Manchester, England	1/2/44	1/3/44
16	Manchester	Liverpool	1/16/44	1/17/44
17	Liverpool	Halifax, Nova Scotia	1/24/44	2/8/44
18	Naples, Italy	Reggio, Italy	6/26/44	6/27/44
19	Reggio	Palermo, Sicily	7/6/44	7/7/44
20	Palermo	Bizerte, French North Africa	7/14/44	7/15/44
21	Bizerte	New York	7/20/44	8/8/44
22	New York	Manchester	8/25/44	9/10/44
23	Manchester	New York	9/15/44	10/5/44
24	Norfolk, VA	Marseilles, France	10/21/44	11/16/44
25	Port Du Bou	New Orleans, LA	12/13/44	1/15/45
26	New Orleans	Panama	1/25/45	1/30/45
27	Panama	Eniwetok	2/2/45	3/2/45
28	Eniwetok	Manus	3/45	3/11/45
29	Manus	Hollandia	3/11/45	3/13/45
30	Hollandia	San Fabian	3/15/45	3/26/45
31	Brunei	Morotai	6/25/45	6/30/45
32	Morotai	Mios Woendi	7/2/45	7/5/45
33	Mios Woendi	Hollandia	7/7/45	7/12/45
34	Hollandia	Manus	7/12/45	7/14/45
35	Manus	Balboa	7/26/45	8/27/45
36	Panama	New York	8/28/45	9/5/45

SS Edward W. Scripps

Edward W. Scripps founded the Scripps Institute of Oceanography in San Diego, and ran the newspaper organization that would evolve into United Press International. His name sake Liberty Ship was completed by the California Shipbuilding Corporation of Los Angeles, California on May 11, 1943. She was operated by the Aluminum Company of America (Alcoa) under a charter from the War Shipping Administration. On May 17, 1943, one 3"/50 caliber gun and nine 20-mm guns were installed, and her armed guard was placed on board. One of the 20-mm guns was removed November 8, 1943, and an additional 3-inch gun put in its place.

The first war-time voyage of the *Edward Scripps* took her from Wilmington to Calcutta, India. The Liberty left the harbor at San Pedro May 21, 1943 and arrived in India July 19. It was a routine journey. No enemy was encountered, and running lights were not shown. She left Calcutta August 11, and sailed to Australia en route to Baltimore. It was not until she arrived at Key West October 18 for the final leg of the journey that the ship joined a small convoy of 10 merchantmen with four escorts, occasionally supported by aircraft. Depth charges were dropped by the escort October 22 and 24, and an emergency 45 degree turn was ordered. She arrived in Baltimore October 26, 1943.

There was no contact with the enemy or anything out of the ordinary on her next voyage, from Norfolk to Cardiff, Wales in a 60 ship convoy with 10 escorts and an aircraft carrier. In Cardiff, her cargo was unloaded and she took on slag and salt water for ballast as aids in keeping the propeller under water. She left Cardiff December 23, sailed to Milford Haven, Wales, and then joined a convoy traveling through the Irish Sea. Once in the Irish Sea, the crew had to stop the engine several times in order to repair the steering gear. The ship had, up to this point, managed to keep up with the convoy. However, on December 25 it became apparent that further repairs were inevitable. The commodore of the convoy was signaled, and the ship headed toward Belfast. Once in port, repairs were made to the telemotor. The ship joined a convoy outside of Bangor January 1, 1944.

The seas were exceptionally rough, and for the next 36 hours the vessel was tossed violently about in the raging waters. Each time the ship pitched and the propellers would clear water, strong vibrations would shake the ship. Engineers worked around the clock attempting to keep the ship's engines from racing. Keeping up with the convoy was proving to be an effort. Early the morning of January 2, a vibration so strong went through the Edward W. Scripps that some men were thrown from their bunks. Initially, it was thought the ship had been hit by a torpedo. As daylight broke, the captain and chief engineer inspected the vessel and found that three plates on the main deck were cracked. Weather conditions were still rough, and winds were continuing to increase. Under the fear that continuing on would further damage the ship, she had to

leave the convoy, anchoring at Gourock, Scotland January 3. A life raft was lost on the journey. She was repaired at Glasgow and returned to Gourock to join 40 merchantmen, escorted by corvettes, frigates and two merchant aircraft carriers, and anchored at City Island, New York February 18.

The Scripps left the anchorage at Boston Harbor March 10 and arrived in Wales March 29. There was no contact with the enemy, but depth charges were dropped and U-boats were apparently in the area. There are no further details. Her next assignments included several missions during the Normandy invasion, with cargoes of Army and Red Cross personnel and vehicles, but records are scarce. Records continue to be spotty up to late July 1944. The ship was continuing her missions between Southampton, England and Allied invasion beaches at Normandy. A series of red alerts, including two possibly caused by flying bombs, followed swiftly by all clear signals occurred July 23 and July 24. There was a yellow radio air raid alert the morning of July 25, but before a final warning was delivered, bursts of antiaircraft fire targeted at planes flying over the ship were heard. Shells exploded directly above the ship, and bullets hit the water just past the stern of the ship.

A report completed in September gives a bit more information regarding the wartime role of the *Edward W. Scripps* during this period. The Liberty made eight crossings between Southampton and Normandy, sometimes with as many as 176 merchantmen. There were a total of 56 air raid warnings between June 6, 1944 and August 1. On four occasions, the ship itself fired upon enemy targets, spending a total of 986 20-mm rounds, and 53 3inch rounds. The ship was struck several times by bullets and shell fragments. No naval personnel were injured, but others aboard the ship were.

The naval commander was upset by the use of running lights by other ships in the convoy during the return voyage to New York. Even though the weather was clear, the ships were showing stern and masthead lights, and using signal searchlights after sundown, disregarding the safety of other ships in the convoy.

The Liberty ship next sailed New York September 15 and landed in Hull, England with a cargo of explosives. She sailed with 68 merchantmen and four escorts. While still docked at New York, an

enlisted man was alleged to have been smoking in his bunk (which was against regulations, possibly due to the nature of the cargo) and passed out after drinking too much alcohol. The bunk caught fire, and the man was removed from ship and placed in detention at Brooklyn. Damage was confined to the bunk. Once underway, a warning flag was hoisted by another ship in the convoy, but no submarines were encountered. Life boat Number Three was lost October 3, the result of high winds. October 4 was election day, but apparently no one aboard thought to vote. The guns were fired, and all were found to be functioning properly. The Scripps arrived in England October 14. The ship's master was complimented for the good relations that prevailed between the armed guard and the civilian crew. She departed for New York October 22 in a convoy that had 52 vessels and six escorts, including an aircraft carrier.

Eight robot bombs flew above the ship October 23. The Edward W. Scripps was under the command of an English pilot as the ship was still navigating its way out of Southend. The pilot believed the bombs were dropped by a Luftwaffe He111 at an altitude of 20,000 feet. The bombs dropped straight down until they reached 5,000 feet. At that point, the bomb's motor cut in, and the bombs started toward their targets. The pilot noted that the Germans often timed their bombing attacks to when factory workers in London would be changing shifts. Four of the eight bombs were shot down by shore batteries. The Scripps itself did not fire upon any of the bombs. English authorities had prohibited her from firing, because if the bomb was struck, its course could be altered and it could strike within the convoy. Since the convoy was not the target of the robot bomb attack, this was not considered contact with the enemy.

The naval commander felt slighted on October 24 when the master and the chief radio operator were taken off the vessel by the British cutter Sun111 for a convoy conference. The commander was told he was welcome to attend, but there would be no room for him aboard the cutter. Navy instructions to Armed Guard officers specified that they were to attend convoy conferences with the ship's chief officers. A potential problem was avoided when 15 dock workers were discovered smoking while unloading explosives at Hull. The naval commander told the petty officer who reported the episode to take any action necessary to prevent a second occurrence.

The Scripps returned to New York and left again for Hull November 24 with a load of explosives. There were 35 merchantmen in the convoy, with 10 corvettes and one carrier serving as escorts. The escort on the port quarter dropped five depth charges the afternoon of December 8, but nothing came of it. Two 45 degree turns were executed as practice, and 480 rounds were discharged from the 20-mm guns, also as practice. The ship began its return to New York December 22. There was another convoy conference December 23. This time, the naval commander made certain to attend. Two alerts were called during the voyage. The first occurred December 25. The escort dropped two depth charges, and an emergency 45 degree turn toward starboard was made. A second alert was called December 27. The commodore of the convoy signaled that they were in danger due to submarines. Although no submarines were visible, another emergency 45 degree turn to starboard was made. A note was made concerning a defect in the starboard 3''/50 caliber gun. The shell was ejecting too slowly, and the problem would be taken care of when the ship arrived in New York.

Her next trip was from New York to Marseilles, France. Her cargo was explosives, and there were 36 ships in the convoy with five escort vessels. She arrived in Marseilles February 16, 1945. From Marseilles, the Edward W. Scripps sailed independently from to Oran, North Africa. From Oran to Bermuda, the Liberty was in convoy with 40 other vessels and five escorts, and independently again from Bermuda to Galveston. While docked at Marseilles, a general alarm was sounded as planes, possibly enemy reconnaissance, were heard flying high overhead. Shore batteries attacked the plane with antiaircraft fire, but it is not known if the plane was hit. On February 28, 1945, the Commodore signaled the convoy to make an emergency turn to starboard. The location was 34° 20' N, 8° 30' W. Three of the escort vessels went to the port quarter, and depth charges were heard. An emergency turn to port was ordered, and General Quarters sounded. The convoy received no official word on this incident, but on that same day at location 34° 30' N, 8° 13' W, U-boat 869 was sunk and all hands on

board were lost (Cremer 1984: 234). Once the ship arrived in Galveston, another defect concerning the starboard 3"/50 caliber gun was brought to the attention of the port director. The electrical firing mechanism had failed due to exposure to salt water and sea air.

The ship left Houston April 6 with explosives and a deck cargo of gliders and sailed to Charleston, South Carolina. The gliders and 300 tons of defective bombs were unloaded. Because of the unloading, the Scripps was delayed in port for eight days. Airplane engines were then taken aboard, and the Liberty left for New York in a convoy that eventually numbered over 100 vessels. Submarine warnings were issued by the Commodore of the convoy April 22, and seven depth charges dropped by the escorts. The convoy encountered heavy fog May 17 to May 19, and a radio message was received that one ship had struck an iceberg. It was noted that the 3"/50 caliber gun still was not operating satisfactorily. A report was also made that the lock on the gunnery officer's door needed to be replaced. The

Naval Armed Guard officer also remarked that the dummy ammunition for the 50-caliber guns should be made smaller as it did not fit in the breech. She arrived in New York May 25.

From there, she steamed to Cristobal, Panama Canal Zone. Records are incomplete, but on August 7, an exchange of fire and 20 to 25 tracers were reported about two degrees above the horizon. There is no further information available on the wartime service of the *Edward W. Scripps*.

After WWII ended, the *Scripps* continued to be operated by Alcoa until August of 1948 when she was purchased by Blidberg Rothchild of New Orleans. That company held her for two months and she was then placed in the Reserve Fleet. She returned to active service in May 1951, this time operated by the Isthmian Company of Mobile, Alabama. She was again placed in the Reserve Fleet in June 1952. She remained there until May 1975, when the Liberty Ship was purchased by the State of Texas to be used in the Artificial Reef Program (Archeological Site No. 41WY143).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	San Pedro	Calcutta, India	5/21/43	7/19/43
2	Calcutta	Vizagapatam, India	8/11/43	8/14/43
3	Vizagapatam	Colombo, Ceylon	8/17/43	8/21/43
4	Colombo	Freemantle, Australia	8/22/43	9/5/43
5	Freemantle	Cristobal, Canal Zone	9/7/43	10/14/43
6	Cristobal	Key West, FL	10/15/43	10/18/43
7	Key West	Baltimore	10/19/43	10/26/43
8	Norfolk, VA	Hoboken, NJ	11/14/43	11/18/43
9	Hoboken	Cardiff, Wales	11/19/43	12/3/43
10	Cardiff	Milford Haven, England	12/23/43	12/23/43
11	Milford Haven	Bangor, Northern Ireland	12/23/43	12/25/43
12	Bangor	Gourock, Scotland	1/1/44	1/10/44
13	Gourock	Glasgow	1/10/44	1/10/44
14	Glasgow	City Island	1/28/44	2/18/44
15	Weehauken, NJ	Boston	2/25/44	2/26/44
16	Boston	Anchorage	3/9/44	3/9/44
17	Anchorage	Halifax	3/10/44	3/12/44

SS Edward W. Scripps

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
18	Halifax	Swansea Bay, Wales	3/15/44	3/29/44
19	Swansea Bay	Belfast	4/11/44	4/12/44
20	Belfast	Cardiff	4/15/44	4/16/44
21	Cardiff	Clyde River, Scotland	4/17/44	4/19/44
22	Clyde River	Greenock, Scotland	4/22/44	4/22/44
23	Greenock	Clyde River	5/5/44	5/5/44
24	Newport, England		6/2/44	
25	Southampton	Solent, England	6/15/44	6/24/44
26	Solent	Southampton	6/24/44	6/24/44
27	Southampton	Southampton	6/28/44	7/2/44
28	Southampton	Solent	7/4/44	7/4/44
29	Solent	Utah Beach, France	7/5/44	7/5/44
30	Utah Beach	Southampton	7/8/44	7/9/44
31	Southampton	Southampton	7/10/44	7/14/44
32	Southampton	Southampton	7/15/44	7/23/44
33	Southampton	Utah Beach	7/22/44	7/23/44
34	Utah Beach		7/25/44	
35	Southampton	New York	8/2/44	9/2/44
36	New York	Philadelphia	9/15/44	9/15/44
37	Philadelphia	Southend, England	9/24/44	10/22/44
38	Hull, England	New York	10/22/44	11/10/44
39	New York	Hull	11/24/44	12/11/44
40	Hull		12/20/44	
41	New York	Marseilles, France	1/17/45	2/16/45
42	Marseilles	Galveston, Texas	2/23/45	3/21/45
43	Houston, Texas	Charleston, SC	4/6/45	4/25/45
44	Charleston	New Orleans	6/6/45	6/11/45
45	New Orleans	Manila, P.I.	6/27/45	
46	Manila	Newport News, VA	9/24/45	10/3/45

SS B.F. Shaw

Named for an Oregon pioneer and Indian agent, the *B.F. Shaw* was completed by the Oregon Shipbuilding Company of Portland, Oregon on April 17, 1943. One 4"/50 caliber gun, one 3"/50 caliber dual purpose gun, and eight 20-mm antiaircraft machine guns were placed aboard. After receiving her Naval Armed Guard, the Liberty Ship entered wartime service. She was operated by Northland Transportation Company under Wartime Shipping Contract #619. Typical equipment a vessel of this type geared for military service would carry included cold weather and foul weather gear for her Navy crew, flashlights, gas masks and other equipment of the sort, as well as recreational equipment such as playing cards, marbles, dominoes and checkerboards for the men to play during the long hours of each day spent in crossing the seas.

Loaded with lumber, the B.F. Shaw left Portland May 3, 1943 and headed to Brisbane. Australia on her first mission. In accordance with wartime procedure, she sailed without showing lights and zigzagged at regular intervals. It is not noted if she traveled in a convoy or arrived at her destination. Her next record has the ship making a trip between Brisbane and Townsville and then back to Brisbane, still with a cargo of lumber. It arrived back from Townsville July 2. During the voyages between the Australian cities, the ship followed written instructions from the Australian Navy. She left Brisbane July 25 with a cargo that included general army material and troops and steamed toward New Guinea. There were 11 other merchantmen in the convoy with one escort vessel and continuous air coverage. She left New Guinea August 29 with one escort and a cargo that included engineering equipment and troops, destined for Goodenough Island. The ship arrived safely August 31. On September 17, 1943 she returned to Australia with ballast.

Her next assignment once again took her from Australia to New Guinea and back. She again carried Army troops and their gear on the outbound portion of the mission, but had no cargo upon returning. Perhaps because of the human cargo, the ship had five escorts as well as continuous air coverage heading toward her destination, but was on her own upon returning. There was one episode of possible enemy contact. The ship had stopped at Goodenough Island, and on the nights of October 8 and 9, air raid warnings sounded. No planes were sighted by the crew of the Shaw. After the voyage, Lt. Donald Wise, commanding officer of the Naval Armed Guard, did make a suggestions in his required report. He wanted a passageway cut into the 3"/50 caliber gun tub and ladders placed inside the 20-mm gun stations rather than outside. His suggestions for improving the 20-mm guns continued. He felt the gun tubs should have twin barrel holders, one to be used as a water jacket and the other as a spare barrel holder. The tubs also needed racks welded to them for spare part boxes and loading trays. The magazines' ventilating equipment should be more adequate. Finally, regarding the 4-inch

gun, the doors on the ready boxes should be changed so they swing open from the side instead of the top.

The ship once again left Melbourne October 30, 1943 and steamed toward Auckland, New Zealand with rations. She sailed independently following written instructions from the Australian Navy and arrived without incident November 6. Loaded with Marine Corps supplies and equipment, the Liberty's next assignment called for her to head to Hilo, Hawaii. She left New Zealand November 24 with neither convoy nor escort. The ship followed instructions received from the New Zealand Navy in conjunction with the US Navy. The ship arrived without incident December 9. Lt. Wise repeated his remarks concerning the efficiency of the gunnery. The B.F. Shaw left Hawaii with a load of sugar and docked at San Francisco two days before Christmas, 1943. She sailed independently, and there were no contacts with the enemy.

She stayed in San Francisco until January 22, 1944, then sailed to Vancouver to load grain. While in Vancouver, a member of the Naval Armed Guard jumped ship. He would be heard from again. After loading a partial cargo of grain, the *Shaw* sailed down to Portland to load more grain, and then departed alone for Cristobal, near the Caribbean entrance to the Panama Canal, on February 6 with no escort and only occasional air support. The ship left Cristobal February 28 and headed to Guantanamo Bay in convoy with 19 ships and five escorts. The *Shaw* arrived in Norfolk March 10, but left with 110 merchantmen and an unknown number of escorts four days later.

Once it passed the Straits of Gibraltar, the Shaw and the other merchantmen in Convoy UGS-36 came within range of Luftwaffe aircraft. Though the Germans had been forced out of North Africa and Sicily in 1943, they still controlled the northern shore of the Mediterranean. Luftwaffe reconnaissance aircraft shadowed the convoy. They reported at regular intervals on the 72 merchantmen and 18 LSTs of UGH-36. The escort commander, Captain Harold S. Berdine, USCG had under his command the cutter Decatur, seven Coast Guard-manned destroyer escorts, and three old destroyers. Upon passing Gibraltar, Berdine's force was augmented by two seagoing tugs and, more important, the British antiaircraft cruiser HMS Colombo. The latter vessel was equipped with a modern radar and an air combat director team.

Before dawn on April 1, a string of bright parachute flares burst over UGH-36. Twenty or more German aircraft, including twin-engine Donier Do-217 medium bombers, attacked the convoy about 40 miles west of Algiers. The planes released torpedoes among the merchantmen, one of which hit and damaged the Liberty SS *Jared Ingersoll*. Several German planes were shot down, and others were probably hit and damaged. The body of a German pilot, as well as several survivors, were recovered by the convoy (Morison 1956).

The Armed Guard aboard the B. F. Shaw was ordered to hold its fire until it could actually locate a target; the gunners spotted their marks and firing was begun. The crew observed a plane which had been hit and continued to fire upon it until it hit the water. The gun crew shot down three parachute flares, and watched as two bombs landed close by the ship. During the general melee, one of the escorts reported a U-boat contact, and escorts raced in dropping depth charges. The primary effect of these detonations was to add to the general confusion. Lieutenant (jg) Harold Jay Caldwell, USNR, commanding officer of the Shaw's Armed Guard, later criticized the conduct of other ships and crews during this attack, calling their firing poor and careless. The ships fired low and directly at the Shaw, which was on the outside column on the starboard side. The Liberty's merchant crew suffered two minor casualties. The Armed Guard personnel were later awarded Operation and Engagement stars for their part in the battle, as did 38 other ships sailing in UGH-36.

Additional planes, believed to be Stuka Ju-57 dive bombers but never clearly identified, were spotted later in the morning but remained out of firing range. The Liberty arrived in Palermo April 4, and unloaded the sacked grain. She proceeded to Castellmare, where her bulk grain was taken off, and then to Naples. Alerts continued as the ship unloaded at Castellmare and Naples. When enemy aircraft attacked at Naples, shore batteries fired, but the ships where ordered not to fire. Lt. Caldwell made glowing remarks about the efficiency and cooperation of the merchant crew, but did not extend a similar view of the Italians acting as longshoremen. He found the Italian labor "neither willing or efficient" (Armed Guard Report, April 19, 1944).

The *Shaw* began her homewards voyage April 22. She carried only water ballast, and traveled with 80 other merchantmen and 14 escorts. There was considerable confusion as to where the ship was supposed to pick up the ballast. The crew was originally told it would receive 2,000 tons of scrap at Castellmare. At Castellmare, they were told they would receive the ballast at Naples, and from there were told she would receive the ballast "somewhere in North Africa." In Algiers, they were told by a War Shipping Administration representative that there was no ballast. The weather the night of April 24 grew rough. As the ship searched for ballast, her booms were rigged and her holds were empty. Because of the lightness of the ship, she was tossed about and hard to control. Eventually, she was separated from her convoy. The next day she received a coded message from the Admiralty Malta, notified of her position, and told to rejoin the convoy. She caught up with her convoy April 26. Depth charges were dropped May 5, 6, 7 and 10. On May 14, with the convoy in position 39° 18' N, 44° 28' W, the convoy commodore passed word that submarines were operating in the area. There was little enemy contact, though, and the vessel arrived in New York May 21, 1944.

While the *Shaw* was lying at New York, a potentially serious discipline problem arose among the members of the Armed Guard. The gunner who had jumped ship in Vancouver had written to a friend still aboard the *Shaw*. The AWOL gunner reported that he had been given no disciplinary action. In fact, he had managed to concoct such a convincing explanation that he was simply assigned to another ship and given a few extra days' leave to boot. Some of the crewmen aboard the *Shaw* took this to mean that they could do as they pleased, that their conduct would not be questioned once the ship returned to port.

The *Shaw* left New York July 17, 1944 with 160 other merchantmen. Five corvettes and two submarine chasers served as escorts. The *Shaw* arrived safely in Scotland August 6 and left August 8 for Omaha Beach, France. The ship left Omaha Beach September 6 and went to Avon mouth, England without incident. She loaded a cargo of explosives and headed to Belfast, Northern Ireland, arriving September 13. From Belfast she returned to the United States, arriving at Newport News, Virginia on September 29.

Explosives were again loaded in Newport News, and the Liberty left for Oran, North Africa October 22, 1944. She traveled in convoys of varying size, and after landing in Oran left for Marseilles. She arrived in Marseilles November 16. The *Shaw* left Marseilles for a return trip to Oran December 7, and then left Oran to return to France and then back to the United States. She arrived in Galveston January 2, 1945 without incident.

From Galveston, the *B.F. Shaw* traveled up to Norfolk, and then headed to Casablanca. A floating mine was spotted February 15, and was fired upon by the escort. The vessel left Morocco February 22 and returned to the US safely in a convoy of varying size. The ship loaded a general cargo and was again under steam March 28. From New York as far as Gibraltar, there were between 17 and 41 merchantmen in the convoy and between 4 and 5 escorts. At Gibraltar, she proceeded independently to Egypt, passed south through the Suez Canal, and continued on to Aden. She left Aden April 27, and headed to Calcutta.

The *Shaw* later returned to Northern Europe. She made an uneventful journey between Antwerp and New York. The Liberty was disarmed October 9, 1945, and her Armed Guard personnel detached. She was then rechartered to the United States Lines until 1948, and then briefly by A. L. Burbank and Company briefly before being placed in the Reserve Fleet in April 1948. Between 1951 and 1952 she was run by Pacific Atlantic, and then placed again in the Reserve Fleet. In 1975 the *B.F. Shaw* was purchased as part of the Artificial Reef Program. The *Shaw* was scuttled on June 19, 1976 near 28° 36' N, 94° 49' W (Archeological Site No. 41GV137).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	Portland, OR	Brisbane, Australia	5/3/43	
2	Brisbane	Townsville, Australia	6/11/43	6/14/43
3	Townsville	Brisbane	6/28/43	7/2/43
4	Brisbane	Port Moresby, New Guinea	7/25/43	
5	Port Moresby	Beli Beli, Goodenough Is.	8/29/43	8/31/43
6	Beli Beli	Port Moresby	9/4/43	9/17/43
7	Melbourne, Australia	Beli Beli	9/27/43	
8	Beli Beli	Milne Bay		
9	Milne Bay	Melbourne		
10	Melbourne	Auckland	10/30/43	11/6/43
11	Wellington, New Zealand	Hilo Bay, Hawaii	11/24/43	12/9/43
12	Hilo Bay, Hawaii	San Francisco	12/16/43	12/23/43
13	San Francisco	Castellmare de Stabia, Italy	1/22/44	4/9/44
14	Naples	New York	4/22/44	5/21/44
15	New York	Avonmouth, England	7/17/44	9/6/44
16	Belfast, Ireland	Newport News, VA	9/13/44	9/29/44
17	Hampton Roads, VA	Marseilles, France	10/22/44	11/16/44
18	Port de Bouc, France	Galveston, TX	12/7/44	1/2/45
19	Galveston	Casablanca	1/23/45	2/17/45
20	Casablanca	New York	2/22/45	3/10/45
21	New York	Calcutta, India	3/28/45	5/14/45
22	Antwerp, Belgium	New York	9/4/45	9/17/45

SS B.F. Shaw

SS Joshua Thomas

Joshua Thomas was a clergyman from Maryland who served in the War of 1812. The Liberty Ship named for him was built by the Bethlehem Fairfield Shipyard and completed on August 13, 1943. The War Shipping Administration chartered her to American Export Lines, Inc. On August 15, 1943, the ship left Baltimore for Philadelphia, and on August 17, the vessel was equipped with the following armament: one 5"/38 caliber gun placed on the stern, one 3"/50 caliber gun placed on the bow, and eight 20-mm guns. While in Philadelphia, the *Joshua Thomas* also received her armed guard crew.

Her first voyage was from Philadelphia to ports in Iran, India, and Egypt. The cargo consisted of general explosives. During the night of September 26, 1943, near the Straits of Sicily, Lt. Carl Meister of the Naval Armed Guard aboard the *Joshua Thomas* reported two bright streaks of light, possibly rockets, coming from a ship off the starboard bow, slightly less than a mile away. Seconds later, the ship became engulfed in flames and disappeared. It was too dark to determine if the destruction of the ship was caused by torpedoes or floating mines.

The crew aboard the Liberty ship immediately went to battle stations. Ahead of them, two ships began firing from their starboard beam. Meister himself could not sight any targets, but the guns aboard the ship were loaded and then fired. The 20-mm guns spent three magazines. The gunner fired off three rounds from the 3-inch gun and one round from the 5-inch. The gun had been reloaded when cease fire orders were given and, in accordance with regulations, the gunners kept a watch on the gun until the following day when they were permitted to fire off the round into a safe area. Meister could not determine if hostile forces were ever actually present, but believed the action of the fire dispelled any intentions an enemy may have had.

The convoy encountered a mysterious submarine on October 15 while passing through the Red Sea. The convoy went to General Quarters and the escorts rushed toward the contract. The submarine surfaced but failed to identify itself until directly challenged by the convoy escort. It turned out to be a "friendly," flying a recognition signal, but the winds were so light that the escorts did not identify the boat until the last minute. In Meister's official report of the *Joshua Thomas*' maiden wartime voyage, he commended the crew for their actions, particularly that of the US escorts. He also commended the commercial radio operator for keeping intercepted messages confidential. Meister did ask that the ship's torpedo nets be utilized more frequently. If the nets were important enough to be standard equipment, he argued, they were certainly important enough to be used consistently. The vessel docked at Khorramshar, Iran, unloaded her explosives and took on a new cargo.

The Liberty ship left Khorramshar November 18, 1943 with a cargo of high octane gas, headed for Bahrain, Arabia. The ship then sailed in convoy for Bombay, India with a load of manganese ore. After unloading at Bombay, she sailed in convoy for the United States via the Suez Canal. At Port Said, the northern end of the canal, and again at Port Tewfik, the *Thomas*' crew was restricted to the ship due to an epidemic of bubonic plague in the area. At Port Tewfik, US Army military police boarded the Liberty Ship and confiscated all the liquor aboard, probably in deference to local Islamic custom.

The number of ships traveling with the vessel varied, from as few as 15 to as many as 50. When headed to the United States, there were 45 ships in the convoy. The number of escort vessels also varied, between five and seven in the Mediterranean Sea to 10 escort vessels and an aircraft carrier when returning to the United States. The voyage was routine, except for a period of seven hours in the Mediterranean Sea, when the convoy "backtracked" to allow a group of ships from Tunis to rendezvous and continue on to Baltimore, Boston and New York.

Upon completion of this voyage, the crew was again commended for its actions, and Lt. Meister once again expressed irritation over the infrequent use of torpedo nets. The *Joshua Thomas* called upon ports in Baltimore, Newport News, Boston and New York. She left New York for Gourock, Scotland on March 6, 1944 with a cargo of explosives, guns and aircraft intended for the Red Army and Air Force. She left Loch Ewe, Scotland on March 27, 1944, and headed to Molotovsk, USSR.

The convoy routes around the North Cape to Russia were perhaps the most difficult anywhere in the world. Unlike the North Atlantic run, where the primary threat to convoys was the U-boat, on the trip to Russia convoys also faced German bombers and surface warships. This combined threat devastated many convoys, and the Allies were hard-put to defend the eastbound merchantmen. The British Admiralty, which maintained operational control of that theater, routed the convoys as far north as possible, in order to avoid land-based German aircraft, sending the merchantmen and escorts along the edge of the ice pack as far north as Bear Island, at 74° north latitude.

The Joshua Thomas was one of 40 American merchantmen in Convoy JW-58. The Admiralty provided a heavy escort, consisting of two escort carriers, HMS Tracker and Activity, the cruiser HMS Diadem, and a close screen of nine escort ships. At the center of the escort group was the old US cruiser Milwaukee, a 23-year-old relic being transferred to the Soviet Navy as a gesture of Allied goodwill. Along the edges of JW-58 patrolled two British "hunter-killer" groups, small squadrons of destroyers and escort vessels trained in the use of coordinated antisubmarine tactics. Finally, stationed along the convoy route were two British battle groups, including two full-sized aircraft carriers and four escort carriers, in case German surface units stationed in the fjords of Norway sortied to intercept the convoy (Morison 1956: 308).

The escort groups were under the command of Captain (D) Frederic John "Johnny" Walker, RN, legendary for his success in tracking and sinking Uboats. The second night out from Loch Ewe, Walker's own ship, Starling, almost literally stumbled across the convoy's first enemy contact. She was U-961, a newly-commissioned boat setting out on her first war patrol. The submarine's commander, Kapitanleutnant Fischer, was probably unaware that a British convoy was near. Starling picked up a strong sonar contact, and Walker made two quick depth-charging runs over the spot. Shortly thereafter the Starling was rocked by a powerful underwater explosion, and a stream of wreckage, oil and bodies floated to the surface. U-961 never surfaced again (Robertson 1979: 204-6). Walker's successful attack was reported to the convoy the following morning.

That same morning, a Luftwaffe reconnaissance pilot spotted the convoy, and U-boats began moving to intercept JW-58 south of Bear Island. The escorts' luck held, though, and the convoy's two escort carriers were kept busy launching attacks against submarines spotted by the escorts or by their own patrol bombers. In the first three days of April, the airborne and surface escorts combined to sink three more U-boats: U-355, U-360 and U-288. There were no survivors from any of them. Convoy JW-58 arrived at Murmansk on April 4 without losing a single merchantman (Morison 1956: 309). The *Joshua Thomas*, along with several other vessels, continued on in convoy east and south through the White Sea to Molotovsk (now Severodinsk, near Archangel).

After leaving Bakaritso, Russia, the ship sailed to Scotland in ballast. She traveled in convoy RA-59, consisting of 46 ships. The escort vessels were 12 destroyers, six light destroyers, six corvettes, one cruiser and two aircraft carriers. On April 27 all hands were called to battle stations as an unidentified aircraft was spotted. The plane, believed to be a twin-engine He 111 medium bomber, made a single run over the convoy before disappearing. Although the plane made no attempt to attack the convoy, 10 rounds were fired at the plane, each missing by several thousand yards. The location of this sighting was 69° 30' N, 36° 00' E, just beyond Murmansk, USSR.

On April 30, a Liberty Ship on the starboard side of the convoy was torpedoed. The merchantman, the William S. Thayer, split in two. The aft part remained afloat until out of sight of the crew aboard the Joshua Thomas but the forward section sunk within two minutes. The escorts, caught by surprise, began dropping depth charges all around the convoy. Ships throughout the convoy began firing their 20-mm and large guns randomly. Seas were calm, the weather clear and cold, with 24 hours of sunlight. There were mines in the area as well, and the crew of the Thomas spotted 25 to 30 of these. The crew attempted to draw this to the attention of the escort by tracer fire and by blinker lamp, but these signals were neither acknowledged nor investigated by the escorts. The *Thayer* was the only ship lost out of Convoy RA-59, but Swordfish aircraft from the escorting carriers sent three Uboats to the bottom. The convoy arrived in Scotland without further incident on May 7, 1944 (Morison 1956: 309).

The ship departed Gourock, Scotland May 11, 1944, in ballast. She joined Convoy ONS 236, consisting of 114 ships. There were approximately eight escort vessels, these being light destroyers, corvettes, and two British aircraft carriers. There were no direct contacts with the enemy, but on

May 30 at 4:55 p.m. the commodore of the convoy raised the signal "submarines in vicinity" and the ships went to general quarters. The convoy made a 45° turn to port. One PBY Catalina flying boat and one carrier-based plane, along with a small escort vessel, closed in on a location approximately four miles from the main body of the convoy. Depth charges were dropped, and the planes made dives toward the water's surface. One ship on the port side of the convoy reported seeing the wake of either a torpedo or submarine, there was no clear indication which. At 6:25 p.m., the convoy made a 45° to starboard, and by 6:35 the entire convoy was back on its original course. During the time of the evasive maneuver, no firing was heard and no apparent enemy action took place. General quarters was secured by 6:50 p.m. The *Thomas* arrived safely in New York on May 27.

The next duty call took the *Joshua Thomas* from New York to Liverpool, England. The ship left New York June 23. She had a general cargo, mostly trucks, and she traveled in Convoy HXS 297, consisting of 132 ships with eight light destroyers and corvettes as its escort complement, as well as two British aircraft carriers.

The eastbound passage to Liverpool was routine. Weather permitting, planes from the escort carrier, usually Albacores and Swordfish, patrolled the areas ahead of the convoy from dawn to dusk. For the men aboard ships, time was spent cleaning and greasing the guns and repairing the ship as necessary. Afternoons were spent in lectures and on weaponry handling, as well as boat and fire drills. Evenings were for study and reading and other homework assignments from the *Bluejackets*' Manual or other study books. The convoy arrived at Liverpool on July 11. After unloading her cargo, the Thomas sailed again for New York in Convoy ONS 245, consisting of 98 ships with eight escorts and three British aircraft carriers. Next, the vessel returned to Scotland with a load of ballast in a 95ship convoy with 11 escorts and three aircraft carriers. On these uneventful passages, time weighed heavily on the merchant crews and gunners. The officer commanding the Thomas' Naval Armed Guard placed special emphasis on training his men.

The remaining missions of the *Joshua Thomas* were uneventful, with no incidents occurring which the Armed Guard officers deemed worth reporting. Her cargoes were tanks, lumber, coal, or iron ore, important supplies to the European Allies. The ship made several stops at ports in France and Scotland, as well as another voyage to the USSR. She then sailed to Belgium, and from there to the United States where she completed her World War II service November 26, 1945.

The *Joshua Thomas* was scuttled on November 4, 1975, as part of a Texas Artificial Reef formed off South Padre Island (Archeological Site No. 41WY144).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	Baltimore, MD	Philadelphia, PA	8/15/43	
2	Philadelphia	Khorramshar, Iran	9/3/43	
3	Khorramshar	Bahrain, Arabia	11/18/43	11/20/43
4	Bahrain	Bandar Abbas, Iran	11/22/43	11/23/43
5	Bandar Abbas	Bombay, India	11/28/43	12/4/43
6	Bombay	Aden	12/7/43	12/14/43
7	Aden	Port Tewfik, Egypt	12/14/43	12/20/43
8	Port Tewfik	Port Said, Egypt	12/21/43	12/21/43
9	Port Said	Alexandria, Egypt	12/24/43	12/25/43
10	Alexandria	Baltimore	12/27/43	1/25/44
11	Baltimore	Newport News, VA	1/29/44	1/30/44

SS Joshua Thomas

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
12	Newport News	Boston	1/31/44	2/3/44
13	Boston	New York	2/9/44	2/10/44
14	New York		3/6/44	
15	Loch Ewe, Scotland	Molotovsk, Russia	3/27/44	4/6/44
16	Bakaritso, USSR	Gourock, Scotland	4/22/44	5/7/44
17	Gourock	New York	5/11/44	5/27/44
18	New York	Liverpool, England	6/13/44	7/11/44
19	Liverpool	New York	7/18/44	8/2/44
20	New York	Gourock	8/25/44	9/8/44
21	Archangel, USSR	West Hartlepool, England	10/30/44	11/13/44
22	Immingham, England	Oran, Algeria	12/2/44	12/22/44
23	Oran	Baltimore	1/14/45	2/6/45
24	New York	Gourock	3/9/45	3/24/45
25	Gourock	Murmansk, USSR	4/17/45	4/25/45
26	Murmansk	Gourock	5/23/45	5/30/45
27	Gourock	Baltimore	5/31/45	6/13/45
28	Baltimore	Solent, England	6/22/45	7/5/45
29	Solent	Southend, England	7/6/45	7/7/45
30	Southend	Methil, Scotland	7/8/45	7/9/45
31	Methil	Oslo, Norway	7/10/45	7/12/45
32	Oslo	Methil	7/21/45	7/24/45
33	Methil	Greenock, Scotland	7/24/45	7/27/45
34	Greenock	New York	7/28/45	8/9/45
35	New York	Baltimore	8/21/45	8/22/45
36	Baltimore	Pauillac, France	8/25/45	9/9/45
37	Pauillac	Bordeaux	9/12/45	9/12/45
38	Bordeaux	Greenock	9/17/45	9/21/45
39	Greenock	Archangel	9/25/45	10/6/45
40	Archangel	Antwerp	10/22/45	11/2/45
41	Antwerp	New York	11/10/45	11/26/45

SS George Vancouver

Completed by the Kaiser Company, Inc. Yard #1 at Portland, Oregon, on July 22, 1942, the *George Vancouver* was named for an English explorer who surveyed the West Coast, including the island which bears his name. The Liberty was operated by The American President Lines under a War Shipping Administration contract. She was put into wartime service August 7, 1942 when she was outfitted with one 5"/51 caliber gun, four 50-caliber antiaircraft machine guns, and two 30 caliber machine guns. A 20-mm machine gun was installed August 15.

The first mission of the SS George Vancouver took her from her berth in Portland, Oregon to Long Beach sailing to Wellington, New Zealand, where she arrived September 4, 1942. On September 5 the vessel left for Aden, Arabia, eventually calling upon ports in Egypt, South Africa, Surinam and Trinidad before arriving in New York January 9, 1943. Most of the journey was unescorted; the Vancouver did not join a convoy until the final part of the voyage, from Trinidad to New York. The voyage took on a tragic note early. Two Naval crew members were lost overboard in heavy seas while the vessel was sailing from New Zealand to Aden. The ship was routed by the British Navy while it passed through the Suez Canal. There was only one significant event involving a possible enemy encounter. Outside of New York some 140 miles, several merchant ships in the convoy opened fire on what they believed to be a periscope. None of the rounds scored a hit, and the threat must not have been too serious as the escorts traveling with the merchantmen did not engage in firing. However, the escort did destroy several floating mines that were encountered between Trinidad and New York. The Commander of the Armed Guard did make a suggestion upon returning to port. He remarked the installation of powder and shell ready boxes for the 5"/51 caliber gun had been reversed and should be changed for expedient handling. He also noted that injuries to crew would be reduced if the insides of the gun tubs were lined with non-splintering material.

While in New York, four 50-caliber guns and two 30-caliber guns were removed and eight 20millimeter and one 3"/50 caliber added. She left New York February 7, 1943 with 40 vessels and six escorts. Her cargo consisted of munitions, rations and trucks. The *Vancouver* arrived February 26 at Mors-el-Kobir, and left for Nemours March 9, where her cargo was unloaded and a new cargo of manganese ore taken aboard. The ship continued on to Oran, and left for New York March 23. There was no close contact with the enemy, but depth charges were dropped March 20-22 while in the harbor, and again March 23 about six hours after the ship pulled out of the dock.

Although crossings were often routine with little out of the ordinary to report, crews aboard the Liberty ships realized the tensions that existed. Perhaps this is what led two Armed Guard crewmen to jump overboard May 3. They were seen being picked up by a boat from USS LST 157; this rescue was later confirmed by the crew of the boat. The men remained on board that boat, and on May 7 the LST left the convoy with several other LSTs. Nothing further was heard from the men.

The ship had initially left New York April 28 with a load of munitions, trucks, tanks and other material of war. She arrived in Oran May 18 and spent the next two days unloading her cargo. She was moored just inside the breakwater. At 10:10 p.m., a bomb was heard to fall on the cliffs astern of the ship, and the air raid siren sounded. All ships and the shore batteries opened fire. Because it was dark and there were no searchlights, it was nearly impossible to distinguish planes flying overhead. The *Vancouver* proceeded to aim its 3"/50 caliber gun at the point of convergence between tracers fired by the shore batteries and tracers fired from Mors-el-Kobir. Ranges and fuse settings were 4,200 yards-10 seconds and 3,750 yards-8 seconds.

It was a fierce exchange of fire. Forty-two rounds were expended from the 3-inch gun, and 2,500 rounds from the 20-mm guns. Firing was not continuous, but was in accordance with the firing by the shore batteries. During the battle, the SS *Samuel Griffin* was struck and eventually had to be towed to the outer harbor. Three enemy planes were believed to be brought down. Lt. Fenwick W. Wall, USNR, aboard the *George Vancouver*, actually witnessed one plane falling and bursting into flames. The all clear was sounded at 11:05 p.m. The entire episode had unfolded in just under one hour.

She sailed for Beni Saf May 20 where ore was loaded, and the vessel returned to Oran. On June 4, 294 Italian prisoners-of-war guarded by US soldiers were taken aboard. She left June 7 with 49 merchantmen and an escort of eight British ships. The convoy arrived in New York June 27.

Her next trip took her from New York to Palermo. She left July 9 in convoy with 44 ships and six US Naval vessels as escorts. Depth charges were dropped six hours after she left the harbor. The convoy eventually reached 79 merchantmen and 15 escorts. Passage across the Atlantic was calm, and the Liberty anchored at Algiers August 13. It sailed again August 15, this time heading toward Bizerte. The mission was no longer calm. Early the morning of August 16, a white flash was seen followed by two rockets. The ship anchored at Bizerte at 9:15 a.m. At 9:00 p.m., the harbor was attacked by enemy planes. Once again, the crew fired its 3-inch guns, this time spending 44 rounds. The 20-mm guns fired 1,522 rounds, some at a dive bomber flying within 2,000 yards of the vessel. The Naval commander believed one of the rounds scored a hit on the plane. One plane was confirmed to be shot down in the barrage, but it is unclear if the kill was made by the crew. Two bombs dropped from planes landed within 200 yards of the Vancouver, one on the port side and one to starboard. Slight damage was reported to piping in the Engine room. A plane was sighted, and the air raid signal again sounded at 4:15 a.m. August 18. Four rounds were fired from the 3-inch gun before it was learned that the plane was friendly. The nerves of the gun crews were definitely on edge.

Tensions remained high as the ship prepared to return to New York. The harbor was again attacked August 23 by enemy dive bombers. The Naval Armed Guard fired 14 3-inch rounds and 712 rounds of 20mm ammunition. Two bombs landed close by, one hitting the water and the other the dock. The Vancouver escaped serious damage, but two US subchasers were destroyed, and a British freighter was damaged. It was bitterly noted by Lt. Wall that defensive action taken by the shore batteries was neither as "energetic or efficient as was to be expected" (Armed Guard reports, Sept. 27). A smoke screen was put up around the harbor, and five planes were thought to have been brought down in the barrage. There were similar air raid warnings the ensuing four mornings, but no planes were sighted.

The *Vancouver* left Palermo, sailing to Bizerte, Oran and Mors-el-Kobir. There a cargo of rifles in need of repairs was unloaded and Italian POWs taken on. The ship joined a convoy headed for home. Twice an Italian prisoner had to be transferred onto other ships because of appendicitis. She re-entered US waters September 24 and was placed in quarantine, possibly because of the Italian prisoners, and remained in quarantine until the 25th. The POWs were unloaded at that time by an Army steamer. As the ship completed its voyage, eight rounds of 5"/51 caliber ammunition were fired at floating targets.

Her next voyage was to Algiers. The trip was swift, but the ship was delayed 10 days while

waiting for a berth to open in the harbor. She left to return to New York November 26. Although no enemy was sighted, three air raid drills were sounded while at Algiers. The merchant crew volunteers participated in these drills, and were very cooperative. A problem with the steering mechanism was discovered on the return trip, causing the ship to lose the convoy. The master followed instructions for stragglers and the convoy was rejoined one day out of New York.

After loading a cargo of trucks, jeeps, and other general cargo, the next assignment took the Liberty to Cristobal, Canal Zone. The journey was quiet, but some events made the crossing almost amusing. A torpedo wake was spotted by a lookout, but the Commodore of the convoy who was aboard the Vancouver believes the "wake" may have actually been a porpoise. Another incident involved planes observed bombing a target at the edge of the horizon. The planes were never positively identified, but there appeared to be debate over whether they were enemy planes or American planes taking target practice on an old hull. There were 584 enlisted men and officers aboard; the men were used as additional lookouts. A problem developed between the civilian master and the naval commander. A coded message had been received, but the master was unable to decode it, and refused to allow the naval officer to help. The master broke radio silence to have the message repeated. Although the message was not repeated, his radio message was acknowledged. The ship eventually landed in San Francisco.

While in San Francisco, one of the 3"/50 caliber guns was replaced with a similar gun. Reports of the *Vancouver* then detail a calm sailing from San Francisco November 3 to Port Apra, Guam, then returning to Portland, Oregon. On the voyage to Guam, the ship was held for three weeks at Eniwetok Atoll as docks were being repaired at Guam. There were no contacts with the enemy in either crossing. She arrived in Portland December 16. The convoys on this mission were small; the largest had but 13 vessels and three escorts. Heading towards home, she sailed from Eniwetok to Portland alone.

The next assignment took her from Portland to Noumea, New Caledonia on January 12, 1943. She had to turn back to San Francisco January 16 as excessive water in the number one hold was causing the ship to list. There were no other unique events, and the ship arrived in New Caledonia February 14. From New Caledonia, she headed to Guadalcanal. The Liberty then headed to Sydney, Australia, where she arrived March 12. Action in the Pacific was noticeably more peaceful; at no time on this assignment did the ship travel in a convoy. However, the nation was still at war. Because of this, gun drills involving loading and sight setting were held daily. and even the civilian crews were trained in manning the guns. Actual target practice was conducted March 9. Five rounds from the 5"/51 caliber gun were fired, as were five rounds from the 3"/50 caliber antiaircraft guns, and 60 rounds from each 20mm machine guns. Again the merchant crews were expected to participate. An interesting aspect of this voyage was the ship carried no cargo.

A load of general cargo was taken aboard as the *Vancouver* headed to Aitake, New Guinea. There is no mention of the cargo being unloaded while at Aitake, but records indicate the vessel headed to Biak with general cargo arriving April 12. She had been sailing solo, but did join five other merchantmen with two aircraft escorts as she sailed to Morotai, again with general cargo. She was delayed in Morotai 10 days due to a lack of port facilities. Her cargo must have been unloaded at this time, because when she later sailed to Brisbane (via Hollandia) the cargo holds were empty. Cargo was taken aboard at Brisbane, and the ship sailed to

Hollandia. An enlisted man was transferred to a hospital ship en route to Hollandia, suffering from an acute sore throat and a high fever.

From Hollandia, the Liberty went to Luzon. Another medical emergency occurred during the trip, this time with tragic results. A young crewman died of pneumonia, and was buried in the American cemetery in the Philippines. The *Vancouver* left Batangas, Philippine Islands and went to San Pedro, California. A periscope feather was sighted briefly, and General Quarters was called. The ship made an emergency turn, but there was no other indication of enemy contact. It arrived in San Pedro August 11.

The ship then went from Long Beach to San Francisco, where her armament was removed February 1, 1945. Originally operated by American President Lines, at the war's completion the Liberty was operated by Oliver J. Olson and Company. After the war, she was placed in the United States Marine Corps Reserve fleet before being operated briefly by Eastern Gas and Fuel Association. It was then held by Dich, Wright, and Pugh before it was again placed in the reserve fleet. It was operated briefly by General SS Corporation in the early 1950s, possibly serving as a cargo ship during the Korean Conflict. The SS George Vancouver was again placed in the reserve fleet in June 1952. Today, the ship rests at the bottom of the Gulf of Mexico as part of the Artificial Reef Program (Archeological Site No. 41B0183).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	Portland, OR	Marshfield, OR	7/26/42	7/27/42
2	Marshfield	Long Beach, CA	8/2/42	8/5/42
3	Long Beach	Wellington, New Zealand	8/11/42	9/4/42
4	Wellington	Aden, Arabia	9/5/42	10/11/42
5	Aden	Safaga, Egypt	10/11/42	10/16/42
6	Safaga	Suez, Egypt	10/16/42	10/17/42
7	Suez	Ismalia, Egypt	10/24/42	10/24/42
8	Ismalia	Suez	11/4/42	11/4/42
9	Suez	Aden	11/6/42	11/11/42
10	Aden	Capetown, South Africa	11/13/42	11/27/42
11	Capetown	Paramanbo, Surinam	11/28/42	12/16/42

SS George Vancouver

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
12	Paramanbo	Port-o-Spain, Trinidad	12/19/42	12/21/42
13	Port-o-Spain	New York	12/27/42	1/9/43
14	New York	Nemours	2/7/43	3/9/43
15	Oran	New York	3/23/43	4/14/43
16	New York	Oran	9/28/43	5/18/43
17	Oran	Nemours	5/20/43	5/20/43
18	Nemours	Beni Saf	6/2/43	6/2/43
19	Oran	New York	6/7/43	
20	New York	Palermo, Sicily	7/9/43	8/20/43
21	Palermo	New York		
22	New York	Algiers		11/2/43
23	Algiers	New York	11/26/43	
24	New York	San Francisco	1/12/44	8/7/44
25	Port Apra, Guam	Portland, OR	11/21/44	12/16/44
26	San Francisco	Port Apra	9/11/44	12/3/44
27	Portland	Noumea, New Caledonia	1/12/45	2/24/45
28	Noumea	Guadalcanal	2/21/45	2/25/45
29	Guadalcanal	Sydney, Australia	3/6/45	3/12/45
30	Sydney	Aitape, New Guinea	3/21/45	3/30/45
31	Aitape	Biak	4/10/45	7/12/45
32	Biak	Morotai	4/13/45	4/16/45
33	Morotai	Brisbane, Australia	5/1/45	5/13/45
34	Brisbane	Hollandia	5/30/45	6/7/45
35	Hollandia	Batangas, Luzon	6/7/45	6/14/45
36	Batangas	San Pedro, CA	7/15/45	8/11/45
37	Longbeach, CA		9/22/45	10/21/45
38	San Francisco	10/21/45	12/8/45	

SS Conrad Weiser

Named for an early colonist of Pennsylvania, the *Conrad Weiser* was built by the Bethlehem Fairfield Shipyard of Baltimore, Maryland, and completed on May 29, 1943 (Figure 29). That afternoon, she was chartered by the War Shipping Administration to Dichmann, Wright & Pugh, Incorporated, which would operate her during the war. In early June, ordnance crews installed her armament – one

5"/38 caliber gun aft and nine 20-mm antiaircraft guns. Eight of these were fitted around the midships and aft deckhouses, while the ninth was placed in the gun tub on the bow where a heavier artillery piece would normally be found.

On June 9, 1943, under the command of Master Leonard D. Watkins, the *Weiser* sailed from Baltimore for New York. Her civilian crew totaled 42 officers, engineers and other crewmen, while her Naval Armed Guard consisted of one Naval Reserve officer, Norman M. Kramer, three enlisted signals personnel, and 25 seamen gunners.

The *Weiser* was fitted with an unusual arrangement of hydrophones known as Mark 29 Antisubmarine Gear. These hydrophones, which were probably intended to provide early warning of submarines or incoming torpedoes, were to be streamed from both the bow and stern of the ship. A small cabin for the gear's operator was fitted in the wheelhouse. The complex arrangement of towing cables, chains and other related equipment was clumsy to use and, as Captain Watkins soon discovered, particularly prone to accident.

At New York, the Weiser was assigned to sail with a convoy departing on June 23. Unfortunately, the Liberty's first wartime voyage got off to an abortive and embarrassing beginning. The Weiser was ordered to leave port early to deploy her Mark 29 gear. She proceeded down the Ambrose Channel early that morning, and just before 7:00 a.m. the Armed Guard crew began laying out the gear. An inexperienced seaman on the starboard side aft began reeling out the cable too quickly, though, with the result that a large loop of slack cable formed in the water near the stern of the ship. This loop was sucked into the Liberty's single screw, entangling the propeller and the propeller shaft. When the fouled cable came taut, it spun the deck winch to which it was secured backwards, which in turn created a

slack in the towing cable on the port side. That cable, too, became fouled in the screw. The Weiser's master stopped engines quickly and tried for several minutes to loosen the cables by moving the ship slowly astern and ahead, but the cables remained jammed. The Weiser anchored at 7:30 and signaled a nearby British escort vessel of its predicament. That afternoon, four tugs came out to the Weiser and took the Weiser under tow to Gravesend Bay, where Navy salvage divers worked for two days to clear the shaft. The Weiser was later towed to Pier 45 on the North River, where salvage divers continued their work. The last parts of the Mark 29 towing cable were cleared away from the propeller shaft on the morning of June 30. The commander of the Weiser's Armed Guard, Lt. Kramer, was replaced by Lieutenant (jg) Arthur H. Messing, USNR.

The *Conrad Weiser* sailed from New York again on July 8, 1943, carrying a cargo of cotton, foodstuffs and tanks. But Captain Watkins' frustrations with the Mark 29 gear were not over. Just after clearing the channel, the *Weiser's* Armed Guard successfully deployed the Mark 29's after cables. The Liberty then dropped astern of the convoy to deploy the towing cables from the bow. In running out the starboard towing cable, though, the Armed Guard let it get afoul of a sharp edge of the bulwark fairing, which ripped the cable so badly that it had to be retrieved. The port side cable was successfully



Figure 29. SS Conrad Weiser, April 23, 1944 (National Archives).

launched. Captain Watkins increased speed in order to resume her position in the convoy, but was unable to do so due to the increased drag caused by the hydrophone gear. Early on July 9, the master requested that the Mark 29 gear be hauled in to allow the ship to regain the convoy. The forward gear was hauled in but damaged in the process; the stern hydrophone was left deployed. The *Weiser* resumed her position in the convoy.

At noon on July 11, the convoy slowed to allow the Weiser to deploy her forward set of hydrophones using spare cables. The Armed Guard accomplished this, but with the increased drag the Conrad Weiser was once again left far behind the other ships in the convoy, and only managed to regain her assigned station with difficulty. The convoy ran into heavy weather on July 14, and 2:30 a.m. the following morning, Captain Watkins notified the Armed Guard commander that the ship would have to heave-to to secure shifting deck cargo. He promised to try to keep on a little headway, since the Mark 29 gear streamed from the bow required a 4-knot speed to maintain its buoyancy. The Liberty's speed dropped too much, though, and the Mark 29 gear sank, hanging straight down below the ship. The Armed Guard could not retrieve the gear, and it was cut away at 10:00 a.m. On July 17, the ship's towed fog buoy became entangled with the stern hydrophone. The fog buoy was successfully recovered, but Captain Watkins later had it streamed again, and this time the hydrophone was damaged. Lt. Messing deployed another hydrophone, but that one proved to be defective. Finally, on the evening of July 18, Lt. Messing gave up on the Mark 29 gear and secured the operator's cabin for the remainder of the voyage.

In his report of the incident, Lt. Messing complained that Capt. Watkins seemed "unwilling to give the Mark 29 gear a fair chance and [was] reluctant to modify his procedures to meet new needs arising through the operation of Mark 29 gear" (Armed Guard Report, 25 August 1943).

For his own part, Capt. Watkins was thoroughly disgusted with the experimental sound gear. In a letter to his company's representative in London, Watkins wrote,

we were forced to cut away our Mark [29] gear at sea, and as far as I am concerned they

can give it back to the Indians. I do not want you to get the impression that I am a one tripper, as my record does not show that, but I must advise you now, that... if certain parties insist on putting [the sound gear] right back again, then you can get me a relief, as I would not go shipmates with that gear again for anyone... It is the worst headach [sic.] that I have ever had on any ship... (Confidential Intelligence Report of Lt. Cdr. J. M. Reynolds, USNR, 11 August 1943, Naval Armed Guard File, SS *Conrad Weiser*).

It is easy to understand Watkins' frustration. The gear had been put aboard by the Navy, and the Armed Guard given the responsibility of operating it. The men directly under Watkins' command had no responsibility for it, and could only watch as the inexperienced Armed Guard seamen handled (or mishandled) the equipment. The gear was clumsy and of questionable use. If the gear did detect a submarine or incoming torpedo, it would be virtually impossible for the towing ship to maneuver evasively. By getting afoul of the propeller in New York harbor, the gear had caused Capt. Watkins considerable professional embarrassment in a very public venue. Perhaps most important of all, the drag caused by the gear made it difficult for the *Weiser* to maintain her station in the convoy, putting the lives of all aboard at added risk. Heartfelt as it was, though, Watkins' letter was also illadvised and indiscreet. A wartime censor intercepted the letter and reported it to the Navy Department and the US Maritime Commission. There is no record of what disciplinary action, if any, was taken against Capt. Watkins.

The 60 or so merchantmen, escorted by six British corvettes and destroyers, completed their passage without further incident, and arrived at Loch Ewe, Scotland on the afternoon of July 21. Just before midnight on the following day, the *Weiser* sailed with a smaller, coastal convoy of 12 other merchantmen and two escorts around the northern tip of Scotland to the Firth of Forth, arriving on the morning of Saturday, July 24. The following Monday afternoon, the *Weiser* joined a large coastal convoy of about 60 merchant ships and four escorts, and steamed south along Britain's east coast, and arrived without incident at London late on the evening of July 28.

After unloading her cargo at London, she sailed in ballast on the morning of August 9 in a 20-ship convoy to Methil, Scotland, and from there again to Loch Ewe. She sailed from Loch Ewe on August 14, 1943, with 24 other merchantmen and two escorts. At 8:00 a.m. the following morning, the group rendezvoused with a larger contingent of ships, and the combined convoy of 65 merchant vessels and six escorts turned west into the North Atlantic. The convoy arrived safely at New York in the early afternoon of August 27, 1943.

In early September, while at New York, the forward-mounted 20-mm gun was removed and a 3"/50 caliber gun put in its place. The Conrad Weiser crossed the Atlantic again and on October 19, 1943, sailed from Casablanca, Morocco in a convoy of 12 merchant ships and four escorts. The following day, she rendezvoused with a larger westbound convoy, bringing the total number of vessels present to 45 merchantmen and nine escorts. The combined convoy was a slow one, steaming westward at an average speed of 8.5 knots, and arrived safely at Newport News, Virginia just after noon on November 6, 1943. On both the outbound and homeward legs of the voyage, the convoy commodores, US Navy captains, had ordered that the Weiser not deploy its Mark 29 hydrophone gear.

The Conrad Weiser sailed from Newport News on November 24, the day before Thanksgiving, in a convoy of 51 merchantmen and 14 escorts. She carried general supplies consigned to the US Army Quartermaster Corps. The escort group included a small aircraft carrier, which provided air coverage throughout the voyage. During the crossing the escorts depthcharged several possible contacts, but the results of these attacks were inconclusive. The convoy arrived at Oran, Algeria on December 12, and the Weiser anchored in the open roadstead outside the harbor. At noon on December 14, the ship was moved to Pier 16 in the harbor, and the unloading of her cargo begun. The unloading was soon ordered stopped, however, and the cargo that had already been removed was placed back aboard. The Conrad Weiser received orders placing her on "stand-by" status. At some point after that, she again offloaded her cargo of quartermaster's supplies at Oran.

The *Conrad Weiser* sailed from Oran on December 22, 1943, embarking on a zigzagging course across the Mediterranean. Following the routing instructions relayed by the British Admiralty, the Weiser steamed first to Bizerte, Tunisia, and then continued on to Naples, Italy, arriving there on December 26. Departing Naples on January 18, 1944, the Weiser steamed to Augusta, Sicily, and then continued on to Bône, Algeria (now Annaba), where she arrived on January 23. From Bône, she returned to Augusta and then Naples, arriving there on February 9. From Naples she returned first to Bizerte and then Tunis, and from there continued on to Oran, arriving there late on the afternoon of Sunday, February 20. From Oran, she sailed on February 24 in a westbound convoy of 103 merchantmen and about 15 escorts. The westbound crossing passed quietly, and the convoy arrived at New York just after midnight on March 18, 1944.

In New York, crews from the Navy's Bureau of Ordnance again changed the armament aboard the *Weiser*. They removed the 5-inch gun on the stern and, in its place, mounted a pair of 3"/50 caliber guns, bringing the Liberty's armament strength to three 3-inch dual-purpose guns and eight 20-mm antiaircraft weapons. The *Weiser* also acquired a new Armed Guard officer, Ensign Hubert Martin Marshall, USNR.

The ship dropped down the coast to Newport News, where she joined convoy UGS-40, bound for the Mediterranean. The 85 merchantmen and 16 escort vessels sailed from Newport News on April 23, 1944. The *Conrad Weiser* carried general cargo and troops. The convoy commodore, Captain Thomas H. Taylor, and the escort commander, Commander Jesse C. Sowell in the US Coast Guard Cutter *Campbell*, anticipated air attack once the ships entered the Mediterranean. Together they had worked out an air defense plan. En route, both the ships in the convoy and the escort vessels repeatedly practiced defending against air attack.

The officers had good reason to be concerned. Three days before UGS-40 sailed, just after sunset on April 20, Luftwaffe torpedo bombers attacked convoy UGS-38 off the Algerian coast near Cape Sigli. Twenty-five to 30 planes swooped down upon the convoy in the gathering darkness. One launched a torpedo which struck the US Liberty Ship *Paul Hamilton*. The *Hamilton*, loaded with high explosives, was literally blown to pieces. Tragically, in addition to the munitions, she was also carrying 471 US Air Corps personnel as passengers. No one on board survived. Including the *Hamilton's* Naval Armed Guard and merchant crew, the total death toll totaled 530 men, the heaviest loss of life aboard any Liberty ship in World War II (Bunker 1990; Morison 1956).

Captain Taylor and Commander Sowell may have been made aware of this tragedy; certainly those aboard the ships in the convoy were not. Convoy UGS-40 passed the Straits of Gibraltar on May 9. The convoy's escort group was augmented off Gibraltar by the addition of the British antiaircraft cruiser HMS Caledon, the US destroyer Benson and destroyer escort Wilhoite, the British salvage tug HMS Hengist, and the American minesweepers Steady and Sustain. The latter two vessels were specially equipped with electronic gear for jamming the radio-controlled glide bombs the Germans had recently begun using. German aircraft shadowed the convoy for two days, determining its course and speed. The convoy was formed into eight columns of ships spaced 1,000 yards apart, with 500 yards spacing between the vessels in each column. The *Weiser* was in position 42, the second ship in the convoy's fourth column from the left. On the evening of May 11, Commander Sowell passed word that the convoy should anticipate an attack at dusk. At 8:44 p.m., just one minute before sunset, shorebased radar picked up the echo of over 60 German aircraft headed for the convoy from the northeast. The escorts began making smoke around the convoy. UGS-40 was then about 55 nautical miles eastnortheast of Algiers.

The weather was misty and the visibility poor. HMS Caledon, the antiaircraft cruiser, was perfectly placed to defend the merchantmen. Located on the port bow of the convoy, the Caledon unleashed a heavy barrage on the incoming planes at 9:06 p.m. Those aboard the Conrad Weiser and other ships in the convoy could not see the target, but watched as the firing gradually spread from the port bow along the port side of the convoy to the stern. Ships all over the convoy began firing around 9:10. At 9:18, the lookout aboard the Weiser witnessed an explosion off the Weiser's starboard quarter and reported (incorrectly) that a ship in the sixth or seventh column was hit. A minute later, another explosion was seen off the Weiser's port quarter. About the same time, Cdr. Sowell ordered an emergency 45° turn to port, turning the ships directly toward the

incoming planes and presenting the smallest possible target.

The first group of Germans bore down in four waves of about seven planes each. The torpedo planes came in low with their engines cut back, swooping down to within 40 feet of the water. The first group swept in over the port bow; another came in from starboard, while others ran down the lanes of ships. Many planes launched torpedoes, but all passed harmlessly through the convoy. The *Conrad Weiser* was towing its Mark 29 hydrophones at the time of the attack, and the operator reported hearing a torpedo pass close aboard. The helmsman and the starboard Navy lookout both spotted its wake as it passed diagonally from port to starboard ahead of the ship.

A *Conrad Weiser* bridge lookout spotted a torpedo plane low over the convoy, about two points off the port bow, being fired on by the lead ships in the third and fourth columns. The *Weiser*'s 3-inch guns on the bow fired on this aircraft as well. Radar operators aboard the escorts reported another wave of planes sweeping in from the port quarter. Cdr. Sowell ordered an emergency turn 45° to starboard, again presenting the smallest possible target. This attack failed as well.

The firing died down gradually, and by 9:40 p.m. all was quiet again. Not a single ship in the convoy or escort group had been hit. Though almost everyone involved had witnessed explosions and believed several ships had been hit – German radio broadcasts bragged of sinking seven merchantmen and one escort – the only casualties in the convoy were four Army passengers wounded by 20mm antiaircraft fire from another ship. After the action, Cdr. Sowell plotted 19 Luftwaffe aircraft shot down over or near the convoy. One more was intercepted on the way home by British fighters and shot down, while another crashed. Fully a third of the 62 Luftwaffe planes in the attack failed to return to base (Morison 1956).

The convoy continued its eastward journey without further incident. The *Weiser* arrived safely at Naples on May 18, 1944. The Naval Armed Guard crews of the *Conrad Weiser* and 37 other US merchant vessels in Convoy UGS-40 were later awarded the Operation and Engagement Star in recognition of their service during the confused battle. The *Weiser* sailed from Naples on May 27, carrying a cargo of aircraft parts and mail. The westbound convoy included 65 merchantmen and 11 escorts. While in the Mediterranean, the convoy escorts laid smoke screens at dusk to discourage enemy aircraft. On June 7 and 8, the convoy was warned of suspected U-boats operating in the area, but no action resulted. The voyage passed quietly, and the *Conrad Weiser* arrived safely at New York on June 19, 1944.

In New York, the *Weiser* took on a load of general cargo, tanks and trucks bound for the Allied armies in Normandy. The Liberty sailed on July 10, 1944, in convoy of 90 merchantmen, six escorts and five Merchant Aircraft Carriers. The latter, known as "MAC" ships, were British tankers or bulk cargo carriers fitted with flight decks and each carried three or four Swordfish biplane torpedo bombers. The Swordfish, though slow and vulnerable against most targets, were supreme antisubmarine patrol planes. The MAC ships also carried cargo (van der Vat 1988).

The convoy ran into heavy fog on its way across the Atlantic, and the ships burned blue stern lights to assist each other in maintaining position. The Weiser arrived at Oban, a small anchorage on the Firth of Lorn on Scotland's west coast, on July 23. The following day, she sailed with 20 other merchantmen and two naval trawler escorts around Scotland's northern coast to Methil, on the Firth of Forth, arriving on July 27. After a convoy conference, the Weiser sailed that same day with 34 other merchantmen to Southend, a port at the mouth of the Thames in Essex, arriving on July 30. The Weiser sailed again on August 2 for Southampton, but anchored at Yarmouth, on the Isle of Wight on August 3. The following day, August 4, she joined a convoy of about 17 other merchantmen and steamed south across the English Channel to Omaha Beach. The Weiser began discharging cargo on August 7, and on the 13th weighed anchor and returned to the British Isles.

The *Weiser* sailed from Bangor (or North Down), Northern Ireland, on August 18, 1944, in ballast in a convoy of about 50 merchantmen. Off Scotland, the convoy rendezvoused with a larger group of about 100 ships, and the combined convoy steamed westward at about eight knots. Again the ships encountered heavy fog, but made no enemy contacts. The convoy arrived safely at New York on September 3, 1944.

The Weiser returned to Europe, this time to the Mediterranean. On October 30, 1945, under the command of R. J. Dexter and loaded with general cargo, she sailed from Leghorn (or Livorno), Italy with seven other escorted merchantmen to Naples. After anchoring overnight in an Italian bay, she arrived at Naples on the morning of November 1. No berths were available, and the Weiser remained anchored in the bay there until November 4, when the Liberty was shifted to a nearby anchorage. On November 11, the Weiser docked at Naples and began discharging her cargo. She sailed independently from Naples a few days later and arrived at Oran on the morning of November 20, 1944. The Weiser left Oran the following day and steamed to Beni Saf, about 45 nautical miles to the southwest, where she took on ballast, and returned to Oran on November 22. On November 23, the Conrad Weiser joined a convoy for the United States. The 84 merchantmen and eight escorts steamed westward at 9.5 knots. The military situation in the Mediterranean had swung so far in favor of the Allies that on this voyage - just six months after Convoy UGS-40 had been attacked by torpedo bombers in those same waters - that the convoys now burned running lights. Collision was now a more serious threat than enemy action.

The running lights were put out again after the convoy passed the Straits of Gibraltar and entered the Atlantic. There were no enemy contacts on the westbound passage, though, and the *Conrad Weiser* arrived without incident at New York on December 11, 1944.

After a Christmas liberty in New York for most of her crew, the Conrad Weiser sailed for Europe again on December 29, 1944. Ensign Marshall had been transferred, and the Armed Guard was now commanded by Lieutenant M. R. Cobaugh, USNR. Lt. (jg) Donald Taylor supervised the Liberty's three Navy radio operators. In the convoy were 40 other merchantmen, 11 naval escorts and an escort aircraft carrier. The eastward voyage across the Atlantic passed without incident, and the convoy anchored in the Downs, off Deal on the English Channel coast, early on the morning of January 14, 1945. She sailed at 2:00 a.m. the following morning for Antwerp, Belgium, but ran aground at 3:37 a.m. She cleared ground later that morning, and returned to the Downs anchorage. The Conrad Weiser sailed

again at 3:15 on January 16, arriving at Antwerp late that afternoon.

Antwerp had endured a massive bombardment by German V-1 flying bombs and V-2 rockets in the days just prior to the Weiser's arrival (see the ship's history of the SS George Farley). The port facilities had been a major target, and a number of ships had been hit. The Weiser lay in the port of Antwerp for three weeks. During this time, the ship came under repeated attack by German V-bombs and aircraft. A ship nearby, the SS Alcoa Banner, was hit by a bomb dropped from a German Ju-88 medium bomber. No aircraft came within range of the Weiser's 20-mm guns, though, and the Armed Guard were prohibited from firing their heavy weapons at the attackers. The Weiser finally sailed for Southend on February 6, with 25 other merchantmen and eight escorts. The convoy anchored at Southend on February 9, 1945. The following day, the Weiser sailed with 28 other merchantmen and six escorts, heading south and west through the English Channel. On February 13, the ships rendezvoused with an Atlantic convoy off Fastnet Rock, Ireland, and headed west for the United States. The escorts made no contact with the enemy, and the convoy arrived safely at New York on March 1, 1945.

At New York, the heavy guns aboard the *Conrad Weiser* were removed and replaced with three 3"/50 caliber guns. These guns, the Armed Guard discovered, were supposedly reconditioned but proved to be in very poor condition. The barrels were pitted, and the guns appeared to have been exposed to the weather for some time.

Under the command of F. W. Lunenburg, the Conrad Weiser made a brief trip to Norfolk, Virginia. Lieutenant George C. Johnson, USNR, commanded the Armed Guard, while Lt. King Wilmot supervised the Navy radio operators aboard. She sailed from Norfolk on March 22, 1945 for New York, and there became part of a 50-ship convoy for Antwerp. The merchantmen, shepherded by four escorts, were joined by 10 merchantmen, three escorts and an escort carrier. En route across the Atlantic, the convoy made two emergency turns when the escorts reported submarine contacts ahead. As the convoy approached the British Isles, small groups of ships began breaking off to continue on to other ports. Thirty-two ships of the original group and seven escorts stayed with the convoy to

the Downs; 26 merchantmen and three escorts continued on to Antwerp. Leaving the anchorage Schelde River on the run into Antwerp, the *Conrad Weiser* collided with the SS *Miaduus*, but neither vessel was seriously damaged. The *Weiser* arrived at Antwerp on April 9, 1945.

The Weiser sailed from Antwerp on April 26 and arrived at the Downs early on April 28. She sailed that same evening for Cherbourg, arriving on April 30 - the same day, it would be discovered, that Adolph Hitler shot himself in Berlin. The Conrad Weiser sailed from Cherbourg to Cowes, on the Isle of Wight, and on May 2 joined a 90-ship convoy bound for the US. Curiously, midway across the Atlantic, on May 8, the Conrad Weiser and two other merchantmen were detached from their westbound convoy and reassigned to a large convoy heading east. The Weiser arrived at Le Harve, France on May 19, 1945. She left LeHarve on May 21 and arrived again at Cowes the following day. On May 22, she joined another US-bound convoy, composed of 75 merchantmen, 8 escorts and one escort carrier. This convoy crossed the Atlantic without incident. As they neared the US, the Conrad Weiser and six other merchantmen were detached from the convoy to proceed independently to Boston. The Conrad Weiser arrived there on June 4, 1945.

At Boston, most of the *Weiser's* Armed Guard was detached. The Guard was left under the direction of Gunner's Mate 2nd Class Sylvan Kline. Captain Lunenburg continued in command of the ship. The *Conrad Weiser* sailed from New York carrying general cargo consigned to the US Army. She probably proceeded independently to Northern Europe, bringing supplies for the Occupation forces there. She returned to New York on August 9, 1945.

That same day the second atomic bomb exploded over Nagasaki, Japan. Perhaps with the end of the war in the Pacific imminent, the remaining members of the *Weiser's* Armed Guard decided to quit their drilling and maintenance duties altogether. In late September, the *Conrad Weiser* was in Galveston, Texas when a naval inspector came aboard and discovered "gross negligence in maintenance and lubrication of guns and equipment." The remaining members of the ship's Armed Guard were detached and returned to the Armed Guard center at New Orleans for disciplinary action. The *Conrad Weiser* sailed from Galveston on September 29, 1945 for the Mediterranean. Capt. Lunenburg remained in command, although the naval personnel on board were now reduced to a three-man maintenance crew led by a Gunner's Mate 3rd Class. The *Weiser* carried general cargo consigned to the Army. She called at Bizerte, Tunis and Naples before returning to the US at Hampton Roads, Virginia on November 22, 1945. The next day she moved up the coast to Baltimore, where she had been built. Her guns were removed there in early December.

On May 22, 1947, the *Conrad Weiser* was chartered at New Orleans to the Eastport Steamship

Corporation. She was rechartered at New Orleans in late July 1949 to the South Atlantic Steamship Line, but was placed in the Reserve Fleet at Beaumont, Texas a few days later. During the Korean War, she was chartered briefly by Lykes Brothers Steamship Co., but returned to the Reserve Fleet at Beaumont in June 1952.

On June 20, 1975 the *Conrad Weiser* was purchased at Beaumont by the Texas Marine Council and delivered to the Texas Artificial Reef Program on June 27. On January 28, 1976, the *Conrad Weiser* was scuttled off Port Aransas near 27° 34' N, 96° 51' W (Archeological Site No. 41NU278).

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	New York	Loch Ewe, Scotland	7/8/43	7/21/43
2	Loch Ewe	Firth of Forth, Scotland	7/22/43	7/24/43
3	Firth of Forth	London	7/26/43	7/28/43
4	Estuary of the Thames	New York	8/9/43	8/27/43
5	Casablanca, French Morocco	Newport News, VA	10/19/43	11/6/43
6	Newport News	Oran, French Morocco	11/24/43	12/12/43
7	Oran	Bizwete, Tunisia	12/22/43	12/24/43
8	Bizerte	Naples, Italy	12/24/43	1/18/44
9	Naples	Augusta, Sicily	1/15/44	1/19/44
10	Augusta	Bône, Algeria	1/20/44	1/23/44
11	Bône	Augusta	2/3/44	2/6/44
12	Augusta	Naples	2/8/44	2/9/44
13	Naples	Bizerte	2/12/44	2/14/44
14	Bizerte	Tunis	2/14/44	2/15/44
15	Tunis	Oran	2/16/44	2/20/44
16	Oran	New York	2/24/44	3/18/44
17	Newport News	Naples	4/23/44	5/18/44
18	Naples	New York	5/27/44	6/19/44
19	New York	Oban Bay, Scotland	7/10/44	7/23/44
20	Oban Bay	Methil, Scotland	7/10/44	7/23/44
21	Methil	Southend, England	7/27/44	7/30/44
22	Southend	Southampton, England	8/2/44	8/2/44
23	Southampton	Yarmouth, England	8/2/44	8/3/44
24	Yarmouth	Omaha Beach, France	8/4/44	8/4/44

SS Conrad Weiser

Voyage	Departure Port	Arrival Port	Departure Date	e Arrival Date	
25	Omaha Beach	Barry Roads, Wales	8/13/44	8/16/44	
26	Barry Roads	Bangor, Ireland	8/17/44	8/18/44	
27	Bangor	New York	8/18/44	9/3/44	
28	Leghorn, Italy	New York	10/30/44	12/11/44	
29	New York	The Downs, England	12/29/44	1/14/45	
30	The Downs	Antwerp, Belgium	1/15/45	1/16/45	
31	Antwerp	New York	2/6/45	3/1/45	
32	Norfolk, VA	Antwerp	3/22/45	4/9/45	
33	Antwerp	The Downs	4/26/45	4/28/45	
34	The Downs	Cherbourg	4/28/45	4/30/45	
35	Cherbourg	Cowes, England	5/1/45	5/2/45	
36	Cowes (bound for US but				
	turned back)	Le Havre	5/10/45	5/19/45	
37	Le Havre	Cowes	5/21/45	5/22/45	
38	Cowes	Boston	5/22/45	6/4/45	
39	Boston	New York	?	?	
40	New York	New York	6/27/45	8/9/45	
41	Galveston, TX	Bizerte, Tunisia	9/29/45	10/21/45	
42	Bizerte	Tunis	10/30/45	10/31/45	
43	Tunis	Naples	11/1/45	11/2/45	
44	Naples	Hampton Roads	11/4/45	11/22/45	
45	Hampton Roads	Baltimore, MD	11/22/45	11/23/45	

SS John Worthington

The *John Worthington* began her career in the far Pacific Northwest. She was a tanker launched in 1920 by the G. M. Standifer Construction Corporation of Vancouver, Washington (Lloyd's Register, 1940). She had four sisters: the *W. H. Libby*, *Livingston Roe, Christy Payne*, and *Chester O. Swain*. She measured 463 feet 3 inches long between perpendiculars (477 feet 10 inches overall), had a beam of 60 feet, and a cargo capacity of 89,851 barrels (Figures 30 and 31). With a fourcylinder, quadruple-expansion engine rated at 2,800 horsepower, the *John Worthington* had a certified speed of 9.9 knots. In a pinch, she could do more.

The *Worthington* was part of the growing fleet of tankers operated by the Standard Oil Company of

New Jersey. She operated for Standard Oil – the "Esso Fleet" – for nearly 20 years, often carrying oil from ports on the Gulf Coast to refineries and distributors on the Atlantic Coast. On September 3, 1939, the day Britain declared war on Nazi Germany, the *Worthington* sailed from Baytown, Texas

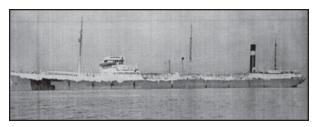


Figure 30. A prewar photograph of the *John Worthington* covered with snow. (From Standard Oil of New Jersey, Ships of the Esso Fleet in World War II.)

for New York with a full load of petroleum products. Before the end of the year, she had made six wartime voyages, carrying some 533,786 barrels of oil products.

The *Worthington* continued to operate as part of the Esso Fleet during the early part of World War II. In 1940 she made 20 voyages, carrying 1,703,648 barrels of oil. She made 21 voyages in 1941, safely delivering 1,777,731 barrels to their destinations.

By early 1942, the *Worthington* had been equipped with a Naval Armed Guard and weapons for self-defense. She carried an Armed Guard of eight, led by a naval reservist coxswain. The tanker carried a 3"/23 caliber dual-purpose gun mounted on the bow, a 4"/50 caliber dual purpose gun on the stern, and four 0.50-caliber Browning machine guns divided between the midships and aft superstructures.

In the spring of 1942, the *Worthington* took on a cargo of petroleum products at Baytown, Texas, bound for Bermuda. During this same period, the US convoy system was just getting organized, and German U-boats were causing heavy losses along the Eastern seaboard, particularly off Florida and the Virginia Capes. Many Allied convoys during this period were forced to make coastwise passages without escort of any kind; the *Worthington*'s voyage to Bermuda may have been one of these. The *Worthington* rounded the tip of Florida safely, though, and continued on to Bermuda without incident. After unloading her cargo at St. George's, the tanker was shifted to a nearby anchorage to

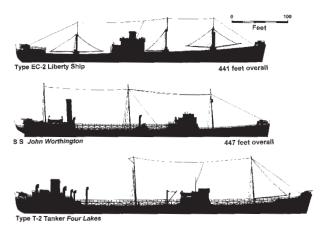


Figure 31. Profiles and relative sizes of a Liberty Ship, a T-2 tanker, and the *John Worthington* (Andy Hall 1995).

wait for the next US-bound convoy. After two-and-ahalf weeks, the *John Worthington* was assigned the best escort available – the US Navy fleet tug *Owl* – and weighed anchor for New York. The trip north passed without serious incident, and the *Worthington* arrived safely in New York at 2:00 a.m. on May 13, 1942.

By autumn the US convoy situation had improved considerably. On the morning of November 15, 1942, under the command of Master Gunnar Gjertsen, she left New York in ballast for Galveston, Texas. Gjertsen had nearly 20 years' experience in the Esso Fleet, having joined the company in 1925 as third mate on the *Worthington*. Gjertsen was all too familiar with the war against merchantmen at sea, having served as a mine warfare officer in his native Norway throughout World War I and, more recently, having served as master of the tanker *Arriaga* when she was torpedoed and sunk in June 1942.

The Naval Armed Guard had been expanded with the addition of more gunners and four naval communications ratings, all under the direction of Lt. (jg) Charles C. Dalton, USNR. The Worthington sailed in a slow, eight-knot convoy of 27 merchantmen and five small escorts. The first few days passed without incident. Late on the afternoon of November 19, while the convoy was abreast of the Georgia coast, one of the escorts dropped two depth charges over a suspected submarine contact. The convoy commodore ordered emergency turns to avoid the area. The following day, in the forenoon watch, lookouts aboard the Worthington spotted what looked like a ditched plane off on the horizon. Two of the convoy's escorts approached and appeared to rescue the airplane's crew. The convoy arrived safely at Galveston in the mid-afternoon of November 25, 1942, the day before Thanksgiving. The Worthington was routed into the Galveston Ship Channel and tied up at Todd Shipyard on Pelican Island. A Todd repair crew came aboard that evening and worked through the night repairing a leaky hull plate on the starboard bow.

The *Worthington* sailed at noon on Thanksgiving Day and proceeded independently down the coast to Corpus Christi. She entered Aransas Pass during the night of November 26-27, and arrived at Corpus Christi in the early morning hours of November 27. Later that morning the *Worthington* was shifted to the Humble Oil Docks at Ingleside, Texas on the northern shore of Corpus Christi Bay, where she took on a load of petroleum products. She sailed from Ingleside at noon that same day and proceeded independently to Harbor Island Dock, Texas, arriving there early on November 28. The *Worthington* sailed from Harbor Island later that morning in convoy with five other merchantmen and six escorts. At 10:00 a.m. on the 29th, the *Worthington* anchored in Bolivar Roads between Galveston Island and the Bolivar Peninsula.

The *Worthington* sailed in convoy from Galveston later that afternoon in a convoy of 29 merchantmen and five escorts for New York. On December 4, 1942, and again on December 5, the convoy escorts depth-charged possible submerged contacts and the convoy made emergency turns to clear the area. The convoy anchored safely at the buoy off Ambrose Light, New York on the afternoon of December 8. After taking on her pilot and making a brief stop at Quarantine, the *John Worthington* made fast at Pier 5, Constable Hook in Bayonne, New Jersey, on the morning of December 9, 1942.

The *Worthington* sailed from New York again on December 16, 1942 in a convoy of 21 merchantmen and five escorts. A Navy blimp patrolled overhead during daylight. The convoy steamed south along the U.S. Atlantic seaboard. The following day, as the convoy passed Norfolk, nine more ships joined the group. On the morning of December 23, the convoy reached a point near Key West, Florida, and the convoy broke up into separate segments routed to different destinations. The *Worthington* proceeded on to Galveston, anchoring again in Bolivar Roads at noon on the day after Christmas, 1942.

After a brief layover in dry dock at Todd Shipyards, the *Worthington* sailed again on December 28 for the Standard Oil Docks on the Houston Ship channel, arriving in the Bayou City that afternoon. After filling her bunkers with 87,000 bbls of Navy diesel oil, she left the dock late on the afternoon of December 29, but ran aground on Hog Island, near the head of Galveston Bay. There appeared to be no damage, but a hawser became entangled in the ship's screw. She was refloated successfully the next morning and continued slowly on to her anchorage in Bolivar Roads, where salvage divers removed the fouled hawser. She sailed from Galveston that same afternoon, December 30, 1942, and steamed alone to Key West and then New York, arriving at Stapleton Anchorage, New York, on January 8, 1943. The *Worthington* had made 11 voyages in 1942, delivering nearly a million barrels of oil.

The Worthington sailed again from the Federal Anchorage in New York Harbor before dawn on January 15, 1943. Three of her tanks were filled with seawater for ballast, but she also carried 27 sacks of mail. In a convoy of 22 merchantmen and five escorts, she steamed first to Guantanamo Bay and then to Aruba, Netherlands West Indies, arriving there at 2:00 a.m. on January 25, 1943. At the oil docks there she took on a cargo of 30,230 bbls of diesel oil and 1,897 bbls of fuel oil, all bound for Cristobal, Panama, and 18,141 bbls of aviation fuel and 36,662 bbls of diesel fuel consigned to the US submarine base at Coco Solo, Panama. She arrived at Cristobal on January 30, 1943, and continued on to Coco Solo the following day. She sailed from Panama without escort, returning to Aruba on February 7. On February 10, 1943, she sailed in convoy for New York with 33 other merchantmen and four escorts. At 6:50 a.m. on St. Valentine's Day, at 21° 2' N, 72° 43' W, one of the escorts made contact with a suspected submarine. The corvette dropped a quick series of eight depth charges about two miles off the convoy's starboard beam. Two other escorts, a corvette and submarine chaser, quickly closed the scene as the convoy commodore ordered emergency turns away from the area. The escorts continued to depth-charge the site for half an hour after the original attack, but were unable to report positive results.

On February 18, the *Worthington* was forced to heave-to when a link pin on one of the engine's four main cylinders broke. The Esso tanker got underway again on three cylinders, but could not regain the convoy. The *Worthington* proceeded on alone, zigzagging, and reached New York on the evening of February 20, 1943.

On March 14, 1943, the *Worthington* sailed from New York in ballast in convoy for Aruba. The convoy consisted of 28 merchantmen and five escorts. She arrived in Aruba on March 24. There she took on 11,000 bbls of gasoline and 20,355 bbls of naval diesel fuel, destined for Pernambuco in Brazil. She loaded 8,377 bbls of gasoline, 5,630 bbls of naval diesel fuel, and 11,000 bbls of kerosene consigned to the Atlantic Oil Company office in Rio de Janeiro. Finally, she loaded 7,600 bbls of kerosene consigned to the Standard Oil Company of Brazil in Rio.

The *Worthington* sailed from Aruba on March 26, 1943, and proceeded in convoy with one other merchantman and a single escort. After a short stop at Curaçao, she continued on to Port-of-Spain, Trinidad, in a convoy of 14 ships and five escorts. She sailed from Port-of-Spain on April 2, 1943, in convoy for Recife, Brazil.

Recife, formerly called Pernambuco, was a key Allied base by that time. Brazil had maintained close relations with the United States for many years, and the US Navy had taken a particular interest in developing Brazil's own naval capabilities. While several countries in South America remained sympathetic to Nazi Germany, Brazil remained loyal to the US. When Germany and Italy declared war on the US just following Pearl Harbor, Brazil immediately broke off diplomatic relations with those nations. Brazil allowed US patrol aircraft to operate from airfields on its soil, and opened its harbors to US warships. Recife was the most important of these, for though it was isolated and only moderately well- equipped, it was located near Cabo de São Roque, the easternmost point on the Brazilian coast. After Brazil declared war on the Axis in August 1942, Recife quickly developed into a major naval installation, providing for the training, outfitting, and resupply of both Brazilian and American antisubmarine forces (Morison 1988).

The *John Worthington* sailed for Recife in convoy TB-7 (Trinidad-Brazil), along with 12 other merchantmen and seven escorts. It was a slow convoy – six-and-one-half knots – but it arrived safely at Recife on the evening of April 19, 1943. The *Worthington* sailed from Recife on April 28 in company with three other merchantmen and four escorts. The escorts left the merchantmen at La Bahia to continue on alone, and the *Worthington* arrived safely at Rio de Janiero on May 4, 1943. After emptying her bunkers at Rio, the *Worthington* sailed again on May 14, 1943, under the command of Captain Gunnar Gjertsen. All tanks had been vented of oil fumes, and main tank nos. 3, 5 and 7 were filled with seawater as ballast. The *Worthington* continued up the coast to São Salvador, Brazil, where she rendezvoused with a U.S.-bound convoy. The convoy sailed on Monday, May 24, and steamed slowly up the coast of Brazil.

The merchantmen of the convoy were arranged in five columns. The *John Worthington* took her assigned position as the second ship in the middle column. Five American warships, a destroyer and four corvettes patrolled ahead of the column and off to each side.

After sundown on May 27, the convoy came abreast of Cabo de São Roque. One after another, the merchantmen swung to port and settled on a northwesterly course for Trinidad. The weather was clear, with a moderate sea and a steady southeast breeze. Four minutes before midnight, a torpedo fired by U-154 racked the third ship in the column just to starboard of the *Worthington* (Kelshall 1994:305). The stricken ship, the Texas Company (Texaco) tanker *Florida*, immediately began to settle and fell out of formation. The officer of the watch on the *Worthington*, Third Mate Frederick Arfstrom, sounded general quarters. Captain Gjertsen was also on the bridge at the time of the explosion.⁵

A minute or so after the *Florida* was hit, while the merchant crew and the Naval Armed Guard were rushing to their battle stations, a torpedo struck the *John Worthington* aft of the starboard side, sending up a sheet of water near the after superstructure. The force of the explosion skewed the stern of the vessel 30° to port, putting her on a collision course with ships in the next column to starboard, but the tanker's steering gear was undamaged and the helmsman quickly got her back on course and in proper formation.

Gjertsen sent his chief mate, Frank Hooper, aft to inspected the damage. Hooper soon returned and reported that the torpedo had struck the no. 8 tank,

⁵The *Florida* did not sink. Escorted by the corvette USS *Saucy*, she struggled into Fortaleza, Brazil, where she was beached and examined. Although her keel was broken, her owners salvaged the vessel and towed her to Puerto Rico, where she underwent temporary repairs. She later received permanent repairs at Chester, Pennsylvania, and returned to war service.

and had seriously damaged the bulkhead separating that tank from those forward and aft. Nevertheless, he reported, the ship seemed to be structurally sound. It was fortunate that the *Worthington* was lightly ballasted, for she had enough reserve buoyancy to keep her afloat. The chief engineer, Walter Gilliam, telephoned the bridge and reported that, apart from some minor damage, all was well in the engine room. Gjertsen made his decision. He would stay with the convoy.

The *John Worthington* kept her station in the convoy and continued on to Port-of-Spain, Trinidad, a distance of over 1,900 nautical miles. Although she bore a hole in her starboard side the size of a small house, she averaged a speed of 9.14 knots over the course from São Salvador, Brazil.

At Port-of-Spain, the tanker was examined by a surveyor from Lloyd's and by Myles Bylsma, chief engineer for Standard Oil. The damage was more severe than first thought. The torpedo had blasted a hole that extended down the side of the ship from just below the main deck, around the turn of the bilge, and along the bottom to within 12 feet of the centerline bulkhead. Tanks 7, 8, and 9 were flooded. But there had been no vibration or additional deterioration of the ship's structure in the 1,900 miles the *Worthington* had traveled since the attack. Since there were no suitable repair yards in Trinidad, the Lloyd's surveyor certified the tanker as seaworthy enough to travel to a repair facility on the Gulf of Mexico (Figure 32).

The tanker sailed from Port-of-Spain on June 8, 1943, and arrived at Guantanamo, Cuba, five days later. She sailed again on June 14, and arrived at Galveston, Texas on the morning of June 21, 1943. She had covered the distance from Trinidad to Cuba at an average speed of 8.47 knots, and the distance from Cuba to Galveston at an average speed of 8.38 knots. In all, the *John Worthington* had steamed about 4,400 nautical miles since being torpedoed off Brazil (Standard Oil Company of New Jersey, 1946: 447-51).

The *Worthington* was examined carefully at Todd Shipyards in Galveston. The damage was extensive, and would require considerable resources to repair. Instead of repairing the ship, the US Maritime Commission declared the *John Worthington* a constructive total loss (CTL). She would not be repaired. The tanker's guns were removed at Todd Shipyard. On July 21, 1943, Standard Oil transferred the title of the *John Worthington* to the War Shipping Administration. The WSA moved the ship down the Texas Coast to the Corpus Christi area. The *John Worthington* was abandoned in the Lydia Ann Channel, near Port Aransas, Texas.

In mid-November 1943, long after the John Worthington had been written off by the Maritime Commission, the War Shipping Administration issued a press release highlighting the tanker's "epic 4,600-mile dash." The press release, delayed to negate any intelligence value it might have for enemy agents, gave a brief summary of the torpedoing and subsequent voyage to the US. Though the article did not provide much detail - again, to deny valuable intelligence to the enemy - the information it did contain about the incident was accurate. No mention was made of the fact that the ship would never sail again. The press release concluded by listing the names and home addresses of several of the Worthington's merchant officers and crew, including Captain Gjertsen.

The vessel was later stripped and the hull left to fall apart until she disappeared beneath the waters of the channel between Port Aransas and Aransas Bay. The wreck is marked by a lighted buoy (Archeological Site No. 41AS88).

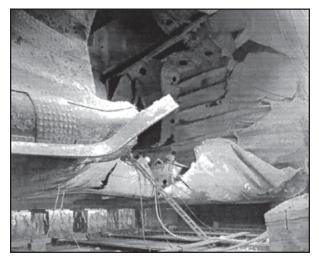


Figure 32. Damage to the *John Worthington*'s hull at Tank No. 8. The explosion punctured the bulkheads fore and aft of Tank 8, flooding Tanks 7 and 9 as well. Photo probably taken after her arrival in Texas on June 21, 1943. (From Standard Oil of New Jersey, The Esso Fleet in World War II.)

Voyage	Departure Port	Arrival Port	Departure Date	Arrival Date
1	Bay Town, TX	Bermuda		
2	Bermuda	New York		6/13/42
3	Lynnhaven Roads, VA	Wilmington, NC	8/3/42	8/5/42
4	New York	Galveston, TX	11/15/42	11/26/42
5	Galveston	Corpus Christi, TX	11/26/42	11/27/42
6	Corpus Christi	Galveston	11/28/42	11/29/42
7	Galveston	New York	11/29/42	12/9/42
8	New York	Galveston (repairs at		
		Todd Shipyard)	12/16/42	12/26/42
9	Galveston	Houston, TX	12/28/42	12/28/42
10	Houston	Galveston	12/29/42	12/30/42
11	Galveston	New York	12/30/42	1/9/43
12	New York	Aruba	1/15/43	1/30/43
13	Aruba	Cristobal, Panama	1/27/43	1/30/43
14	Cristobal	Aruba	1/31/43	2/7/43
15	Aruba	New York	2/10/43	2/18/43
16	New York	Aruba	3/14/43	3/24/43
17	Aruba	Recife, Brazil	3/26/43	4/19/43
18	Recife	Rio de Janeiro	4/28/43	5/4/43
19	Rio de Janeiro	Bahia, Brazil	5/14/43	5/18/43
20	Bahia (torpedoed 5/27/43)	Port of Spain, Trinidad	5/24/43	6/5/43
21	Port of Spain	Guantanamo	6/8/43	6/14/43
22	Guantanamo	Galveston	6/17/43	6/21/43

SS John Worthington

LIBERTY SHIPS BUILT IN TEXAS

Of the roughly 2,700 Liberty Ships completed during World War II, 208 were built in Texas. All were built at the Houston Shipbuilding Corporation, located at Irish Bend Island on Buffalo Bayou (Figure 33). Management of the yard was later assumed by the Todd Shipyard Corporation, after which the facility was known as the Todd Houston Shipbuilding Corporation.

Although the shipyards that built Liberty Ships were widely known for the speed with which they

completed the ships (Figure 34), the Todd Houston Yard was one of the slower engaged in wartime construction. The first Liberty launched by the yard, delivered in May 1942, took 300 days to complete. The rate of completion increased gradually, but remained low throughout the war. In late 1943, when Liberty Ship construction reached its peak nationally, Todd Houston's contract with the War Shipping Administration still allowed for a 45-day construction schedule. Even so, the average period from the laying of the keel to delivery for ships built

May 1942	as a destanda 1
Jun 1942	and the later and the later and the later of
Jul 1942	and the last of th
Aug 1942	and the house and the house and the house and the house 5
Sep 1942	and the houter and the houter of a state of the state of
Oct 1942	and the last and the lost of t
Nov 1942	and de landes and de landes and de landes of
Dec 1942	and de landers and at landers and at landers of
Jan 1943	and the location of
Feb 1943	and the last one had been and the last of the last of the last of 5
Mar 1943	and the last of th
Apr 1943	and the last of low looks and the lost of
May 1943	Test de la fair en la de la fair 7
Jun 1943	and the last of th
Jul 1943	and the host of a local section and the host of the ho
Aug 1943	and the laster of the laster 7
Sep 1943	and the part of the local of the local of local of the lo
Oct 1943	المحلمانية اجر وعلمانية اجر
Nov 1943	The last of the second states and shades and
Dec 1943	and the location of
Jan 1944	and the locks and the locks and the locks and the locks 5
Feb 1944	and the second states and the last of the second states of the second st
Mar 1944	and de lordes 7
Apr 1944	and the house of the house of
May 1944	and the last of th
Jun 1944	and the section of th
Jul 1944	and the section of th
Aug 1944	and the first and the locates 7
Sep 1944	and at the sect of
Oct 1944	and the section of th
Nov 1944	متاسل قال من وتلمل قالية وتلما فالية وتلما فالية وتلما فالية وتلما فالية وتلما فالية وتلما يقالها وتلما
Dec 1944	en la
Jan 1945	and the last of a start of the section of the secti
Feb 1945	
Mar 1945	and at the two points and at the point of the second

Figure 33. Liberty Ships built at Houston, Texas in numbers per month (Sawyer and Mitchell 1973).

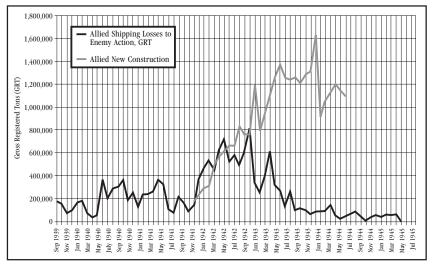


Figure 34. Allied shipping losses vs. new construction, 1939-1945.

at Todd Houston never dropped below 50 days. The ships built at Houston cost an average of \$1,833,400 each, only slightly more than the national average of \$1,822,000 (Lane 1951: 175, 826; Sawyer and Mitchell 1985: 168-179).

In granting contracts to Todd Houston, the WSA was careful to assign the yard vessel names that would appeal to local sentiments and patriotism. Famous Texans made up a considerable share of the Liberty Ships built at Todd; the first two Liberty Ships completed were the Sam Houston and the Davy Crockett. The yard built a second Sam Houston after the first was lost in combat. Other heroes of the Texas Revolution followed with the launching of the William B. Travis, James W. Fannin (Figure 35), James Bowie and Benjamin R. Milam (Figure 36). Contemporary war heroes were memorialized as well; the Houston Volunteers honored the local men who volunteered en masse for Navy duty after the cruiser USS Houston was sunk in the Pacific early in the war. Henry M. Robert, the Army engineer who helped design the Galveston Seawall and other harbor projects, was honored. The Edwin W. Moore was named in honor of the commanding officer of the Texas Navy. Among the state's governors represented were James S. Hogg and Oran M. Roberts. Henry Austin, who brought the first steamboat to Texas in the 1820s, was on the roster, as was Charles Morgan, the New York merchant who

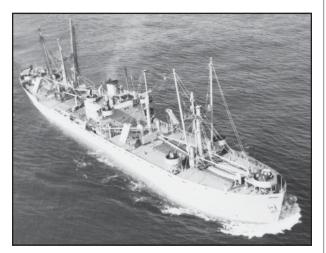


Figure 35. The SS *James W. Fannin* was produced in Texas in May 1943. It survived the war and was grounded and wrecked near Halifax in 1966 (United States Naval Institute).

dominated maritime commerce in Texas and the Gulf of Mexico from the 1830s to the 1870s. Other famous Texans represented on the launching ways at Irish Bend were *Jane Long*, *Charles Goodnight*, *Lorenzo de Zavala* and *Big Foot Wallace*. The Houston yard also built a number of ships named after famous Confederate generals, including the *A.P. Hill, John B. Hood, James Longstreet, J.E.B. Stuart* and *George E. Pickett*.

Liberty ships built in Texas.				
Contracts to the Houston Shipbuilding Corporation:				
Government Contract No.	Yard No.			
95 - 119	1 - 25			
265 - 276	26 - 37			
Contracts to Todd Houston Ship	building Corporation:			
Government Contract No.	Yard No.			
828 - 859	38 - 69			
1936 - 1966	70 - 100			
2420 - 2431	101 - 112			
2908 - 3003	113 - 208 (varied			
	order)			

The following list shows the Liberty Ships built at Houston in order of their yard numbers. The fate of each ship shown in the Notes column represents a fair sample of the careers of the Liberty ships as a class. All the information in the table is taken from Sawyer and Mitchell, *The Liberty Ships*, pp. 168-179.

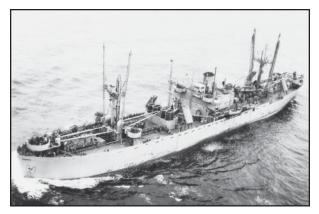


Figure 36. The SS *Benjamin R. Milan* was produced in Texas in June 1943. It sank near Baltimore harbor after a boiler room explosion in March 1945, but was later repaired. After several name changes, it was scrapped in 1968 (United States Naval Institute).

Yard Number	Name	Launched	Notes
1	Sam Houston (I)	May 1942	Sunk by U-203 near the Virgin Islands, June 28, 1942.
2	Davy Crockett	June 1942	Sold for scrap in March 1969, but later converted to pipe laying vessel.
3	Matthew Maury	June 1942	Damaged by U-371 off Bougie, Algeria; later repaired. Reserve Fleet; scrapped at Terminal Island, March 1961.
4	Winfield Scott	June 1942	Scrapped at New Orleans, July 1966.
5	Michael J. Stone	June 1942	Damaged by U-300 near Gibraltar, February 17, 1945; repaired. Reserve Fleet; scrapped at Baltimore, March 1960.
6	David S. Terry	July 1942	Reserve Fleet; scrapped at Bilbao, Philippines, March 1971.
7	Benjamin Bourn	August 1942	Sold for scrap at New Orleans, November 1969.
8	Daniel Carroll	August 1942	Scrapped at Philadelphia, March 1960.
9	Nicholas Gilman	August 1942	Scrapped at Philadelphia, 1963.
10	Samuel Griffin	August 1942	Scrapped at Baltimore, November 1961.
11	Thomas Hartley	August 1942	Converted to floating platform at Seattle, 1966.
12	Daniel Hiester	September 1942	Reserve fleet; scrapped in Spain, April 1972.
13	Benjamin Huntington	September 1942	Reserve Fleet; scrapped at Santander, April 1971.
14	John Laurance	October 1942	Scrapped at Panama City, July 1963.
15	Samuel Livermore	October 1942	Scrapped at Jersey City, December 1959.
16	Houston Volunteers	October 1942	Scrapped at Oakland, 1966.
17	A. P. Hill	October 1942	Scrapped at Panama City, October 1965.
18	James Longstreet	October 1942	Grounded in storm at Sandy Hook, New Jersey, October 1943. Refloated but declared Constructive Total Loss (CTL), November 1943. Sunk in 20 feet of water in Cape Cod Bay, April 24, 1945, and used as missile target until 1971.
19	Joseph E. Johnston	November 1942	Scrapped at Kearny, New Jersey, May 1969.
20	J. E. B. Stuart	December 1942	Scrapped at Portland, Oregon, July 1969.
21	John B. Hood	December 1942	Scrapped at Wilmington, North Carolina, March 1965.
22	Big Foot Wallace	December 1942	Begun as <i>Fitzhugh Lee (I)</i> . Recalled for service during Korean War. Scrapped at Panama City, August 1965. Builder's nameplate presented to the Texas Maritime Academy at Galveston, January 1966, under the Liberty Ship Memorial Program.
23	Amelia Earhart	December 1942	Wrecked off Borneo, November 10, 1948, and declared CTL. Sold and repaired. <i>Modena</i> , 1951; <i>Przyszlosc</i> , 1951; <i>Jiading</i> , 1965. Broken up?
24	Champ Clark	January 1943	Scrapped at Terminal Island, 1958.
25	Joseph T. Robinson	January 1943	Scrapped at Panama City, April 1967.
26	Stephen F. Austin	July 1942	Scrapped at New Orleans, September 1967.

Yard Number	Name	Launched	Notes
27	William B. Travis	July 1942	Mined or torpedoed off Bizerte, Tunisia, Septem- ber 12, 1943. Repaired and returned to service. Reserve Fleet; scrapped at Panama City, December 1964.
28	<i>Mirabeau B. Lamar</i> (Figure 37)	July 1942	Scrapped at Mobile, January 1963
29	Theodore Sedgwick	September 1942	Scrapped at Hirao, March 1961.
30	Thomas T. Tucker	October 1942	Ran ashore in fog near Cape Town, South Africa, November 28, 1942. Total loss.
31	Jeremiah Wadsworth	October 1942	Sunk by U-178 off South Africa, November 27, 1942.
32	James Bowie	November 1942	Reserve Fleet; scrapped at Brownsville, Texas, December 1971.
33	Thomas J. Rusk	November 1942	Reserve Fleet; scrapped at Panama City, October 1972.
34	Lambert Cadalader	November 1942	Scrapped at Baltimore, January 1960.
35	James Madison	January 1943	Scrapped at Oakland, May 1966.
36	William L. Smith	January 1943	Scrapped at Panama City, August 1964.
37	Stephen C. Foster	January 1943	Scrapped at Oakland, June 1961.
38	William Eustis	January 1943	Torpedoed by U-435 at 50.38° N, 34.46° W, March 17, 1943, and abandoned. Torpedoed and sunk later that day by U-91.
39	John Armstrong	February 1943	Scrapped at Mobile, July 1964.
40	William H. Crawford	February 1943	Scrapped at Terminal Island, December 1969.
41	James Barbour	February 1943	Reserve Fleet; scrapped at Clatshanie, Oregon, November 1970.

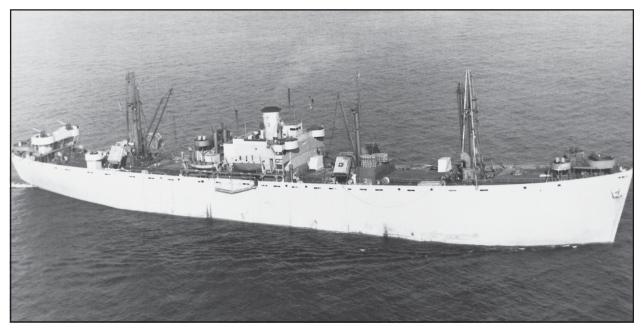


Figure 37. The SS *Mirabeau B. Lamar* was produced in Texas in July 1942 was later scrapped at Mobile, Alabama in January 1963 (United States Naval Institute).

Yard Number	Name	Launched	Notes
42	John H. Eaton	February 1943	<i>Myriam</i> , 1946; <i>New Kaohsiung</i> , 1957. Scrapped at Kaohsiung, March 1968.
43	Joel R. Poinsett	February 1943	Broke in two and abandoned at 43.30° N, 56.30° W, March 21, 1944. Afterpart towed to Halifax and converted to depot ship.
44	John Bell	March 1943	Damaged by U-410 off Sardinia, August 26, 1943. Caught fire and abandoned; sank the following day.
45	John C. Spencer	March 1943	Scrapped at Baltimore, 1962.
46	James M. Porter	March 1943	Scrapped by Bellingham, Seattle, October 1961.
47	William Wilkins	March 1943	Scrapped at Panama City, June 1963.
48	Fitzhugh Lee (II)	March 1943	Scrapped at Baltimore, September 1959.
49	Jubal A. Early	April 1943	Nicolaos G. Kulukundis, 1947; Captain Nicholas, 1964. Scrapped at Shodoshima, June 1968.
50	Richard S. Ewell	April 1943	Scrapped at Camden, New Jersey, 1965
51	George E. Pickett	April 1943	Scrapped at Kearny, New Jersey, March 1969.
52	William N. Pendleton	April 1943	Reserve Fleet; sold to Pakistani buyers, December 1970; resold and scrapped at Burriana, Spain, August 1971.
53	Moses Austin	April 1943	<i>Cherbourg</i> , 1947; <i>Antonios</i> , 1954; <i>Dimos</i> , 1966. Scrapped at Whampoa, July 1969.
54	Benito Juarez	April 1943	<i>Jalakirti</i> , 1947; <i>Chrysanthi</i> , 1956. Scrapped at Hong Kong, August 1968.
55	David G. Burnet	May 1943	Scrapped at New Orleans, June 1964.
56	James S. Hogg	May 1943	Acquired by USN and renamed <i>Pavo</i> , AK 139, November 1943. Returned to WSA under original name, December 1945. Reserve Fleet; scrapped at Bibao, June 1972.
57	Jane Long	May 1943	Reserve Fleet; sold December 1972 to Dutch buyers. Renamed <i>Roem II</i> for towage to ship breakers at Bibao. Scrapped 1973.
58	James B. Bonham	May 1943	Scrapped at Portland, Oregon, November 1966.
59	James W. Fannin	May 1943	<i>Saint Malo</i> , 1947; <i>Tegean</i> , 1963. Grounded and wrecked near Halifax, December 20, 1966.
60	Anson Jones (Figure 38)	May 1943	<i>Lappland</i> , 1946; <i>Caspaina</i> , 1950. Scrapped at Shanghai, 1969.
61	Frederick L. Dau	May 1943	<i>Stylianos N. Vlasopulos</i> , 1947; <i>Plate Trader</i> , 1964; <i>Antonia II</i> , 1965. Scrapped at Kaohsiung, April 1969.
62	James E. Haviland	June 1943	Reserve Fleet; scuttled as an artificial fish reef off the Virginia Capes, 1976.
63	Edward Burleson	June 1943	Scrapped at Oakland, April 1963.
64	Lorenzo de Zavala	June 1943	Scrapped at Philadelphia, October 1943.
65	<i>Benjamin R. Milam</i> (Figure 36, pg. 75)	June 1943	Sank near Baltimore after boiler room explosion,March 8, 1945. Repaired; Hyeres, 1947; Duero, 1961;Fanor, 1964; scrapped at Santander, October 1968.

Yard Number	Name	Launched	Notes
66	Sidney Sherman	June 1943	Scrapped at Baltimore, August 1959.
67	John Mary Odin	June 1943	Scrapped at Panama City, May 1961.
68	Mary Austin	June 1943	Reserve Fleet; scrapped at Gandia, Spain, September 1972.
69	E. A. Peden	July 1943	<i>Sounion</i> , 1947; <i>Maria Los</i> , 1949; <i>Mariel</i> , 1955; <i>Northport</i> , 1958; <i>Sagittarius</i> , 1966. Sank at Buenos Aires after collision, September 25, 1969; refloated and sold for scrapping at Campana, Argentina, December 1969.
70	Sam Houston II	July 1943	Scrapped at Portland, Maine, December 1959.
71	George C. Childress	July 1943	Grounded and sunk near Bassein, Burma, July 27, 1967.
72	J. Pinckney Henderson	July 1943	Collided with tanker <i>J. H. Senior</i> off Newfoundland on maiden voyage, August 18, 1943. Both ships were drenched with blazing aviation fuel, and all but nine crew members from both ships were killed. Towed to Nova Scotia, where <i>Henderson</i> was beached and allowed to burn herself out. Declared CTL and scrapped at Philadelphia, July 1944.

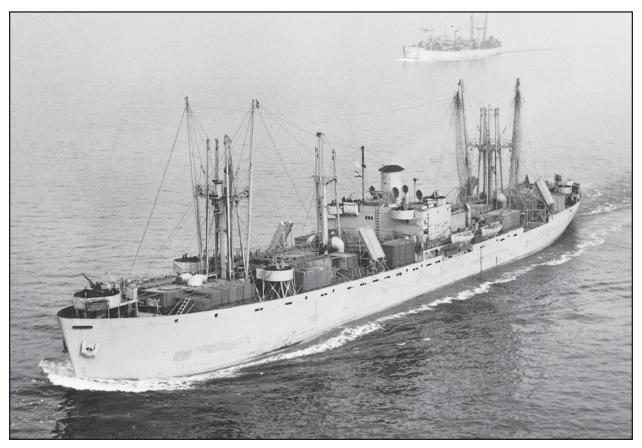


Figure 38. The SS *Anson Jones* was produced in Texas in May 1943 and later scrapped in Shanghai in 1969 (United States Naval Institute).

Yard Number	Name	Launched	Notes
73	George P. Garrison	July 1943	<i>Belgian Liberty</i> , 1945. Returned to US under original name, 1947. Reserve Fleet; scuttled as artificial fish reef off the Virginia Capes, 1974.
74	Oran M. Roberts	August 1943	Reserve Fleet; scuttled as artificial fish reef off Alabama, 1974.
75	Robert T. Hill	August 1943	Scrapped at Wilmington, North Carolina, May 1963.
76	Frederick H. Newell	August 1943	Scrapped at Portland, Oregon, March 1968.
77	John H. Reagan	August 1943	Scrapped at Kearny, New Jersey, April 1967.
78	R. M. Williamson	August 1943	<i>Nicholas Kairis</i> , 1947; Grounded and sank near Kuchino Shima, Japan, May 5, 1959.
79	Jesse Billingsley	August 1943	<i>Laguna</i> , 1949. Re-engined by Fiat, 1950. Marilu, 1964; <i>Orione</i> , 1965. Engine breakdown and holds flooded near Azores, February 3, 1969. Abandoned; later taken in tow. Later scrapped at Bibao.
80	Edwin W. Moore	August 1943	Scrapped at Baltimore, March 1960.
81	George Bellows	September 1943	<i>Evanthia</i> , 1947; <i>Evie</i> , 1960; <i>Albino</i> , 1965. Scrapped at Bilbao, December 1969.

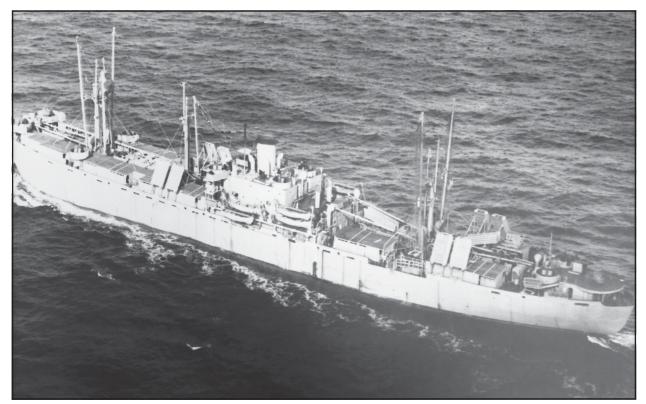


Figure 39. The SS *Jose Navarro* was built in Texas in October 1943. It was damaged by a U-178 submarine in the Indian Ocean in December 1943 while carrying Army stores and mules. She was abandoned, reboarded, and abandoned again. The *Navarro* was torpedoed again and sunk by the same submarine. She was streaming anti-torpedo nets when attacked, but the torpedo struck forward of the net (United States Naval Institute).

Yard Number	Name	Launched	Notes
82	David Wilmot	September 1943	<i>Anthony Leewenhoek</i> , 1947; <i>Laurenskerk</i> , 1947; <i>Grosvenor Trader</i> , 1960; <i>Gloria</i> , 1967. Scrapped at Shanghai, December 1968.
83	Samuel H. Walker	September 1943	Scrapped at Kearny, New Jersey, October 1964.
84	Erastus Smith	September 1943	<i>Kyma</i> , 1947; <i>Rodos</i> , 1960. Scrapped at Shanghai, September 1967.
85	<i>Jose Navarro</i> (Figure 39)	October 1943	Damaged by U-178 in Indian Ocean while carrying Army stores and mules, December 27, 1943. Abandoned; reboarded; abandoned again. Torpe- doed again and sunk by same submarine. <i>Navarro</i> was streaming anti-torpedo nets when attacked, but torpedo struck forward of the net.
86	Joshua L. Leach	October 1943	<i>Evros</i> , 1947; <i>Bar</i> , 1961. Grounded off Split, February 27, 1967, and scrapped in place.
87	Harvey C. Miller	October 1943	Scrapped at Hirao, February 1960.
88	George W. Lively	October 1943	Scrapped at Philadelphia, June 1966.
89	Thomas W. Gregory	October 1943	<i>Belfri</i> , 1949; <i>Romance</i> , 1960. Severely damaged by fire at Naples, October 31, 1969; towed to Split and scrapped.
90	Will R. Wood	October 1943	Scrapped at Yokosuka, June 1961.
91	William M. Rayburn	October 1943	Scrapped at Philadelphia, October 1966.
92	L. H. McNelly	October 1943	Zeeman, 1947; Trompenberg, 1950; Santa Fe, 1959. Lengthened at Yokosuka, 1959. Lost radio contact in storm in Straits of Magellan and pre- sumed lost, August 13, 1967.
93	Lucien B. Maxwell	October 1943	Grounded in Seine Estuary, August 6, 1945, and broke in two. Total loss.
94	Albert S. Burleson	November 1943	Reserve Fleet; scrapped at Santander, January 1971
95	Joseph H. Kibbey	November 1943	Converted by US Army to troop transport. Later transferred to Navy and renamed <i>Phobos</i> , AK129. Returned to WSA, March 1946, and placed in Reserve Fleet under original name. Scrapped at Oakland, May 1970.
96	Oscar Chappell	November 1943	Scrapped at Baltimore, March 1958.
97	J. S. Cullinan	November 1943	Acquired by US Navy and renamed <i>Alderamin</i> , AK 116. Returned to WSA, April 1946 and trans- ferred to Reserve Fleet under original name. Scrapped in the United States, about 1965.
98	Hugh Young	November 1943	Acquired by US Navy and named <i>Zaurak</i> , AK 117. Served in Pacific. Returned to WSA under original name, March 1946. Reserve Fleet; scrapped at Oakland, June 1963.
99	Matthew J. O'Brien	November 1943	Scrapped at Panama City, July 1966.
100	Henry Austin	December 1943	Scrapped at Tacoma, October 1964.

Yard Number	Name	Launched	Notes
101	Charles Morgan	December 1943	Struck by aircraft bombs at Utah Beach, Normandy, June 10, 1944. Settled in 33 ft. of water and abandoned as total loss.
102	John W. Gates	December 1943	<i>Aristotelis</i> , 1947. Scrapped at Onomichi, October 1968.
103	Anthony F. Lucas	November 1943	Acquired by US Navy and renamed <i>Zaniah</i> , AK 120. Sent to US Naval Reserve at Pearl Harbor, April 1946. Returned to US Maritime Commission and placed in Reserve Fleet, May 1947. Scrapped at Tacoma, January 1974.
104	William Becknell	December 1943	Acquired by US Navy and launched as USS <i>Sabik</i> , AK 121. Service in Pacific. Returned to the WSA and placed in Reserve Fleet, March 1946. Scrapped at Oakland, November 1961.
105	Harry Percy	December 1943	<i>Ira</i> , 1947. Grounded on Goodwin Sands, England, on March 7, 1947 and broke in two.
106	Rebecca Boone	December 1943	Sold to commercial interest, 1948. <i>Venerator</i> , 1950; <i>Giga</i> , 1958; <i>Cuyano</i> , 1960. Lengthened in 1960 and converted to bulk carrier. <i>Palos</i> , 1961; <i>Evmar</i> , 1963; <i>Antonia B.</i> , 1971. Scrapped at Split, December 1972.
107	Charles Goodnight	January 1944	<i>Baccarat</i> , 1947; <i>Margalitis</i> , 1954; <i>Winona</i> , 1964. Scrapped at Aioi, December 1968.
108	Andrew Briscoe	January 1944	Crete, 1947. Scrapped at Sakiade, February 1969.
109	William M. Eastland	January 1944	<i>Le Havre</i> , 1947; <i>Ville du Havre</i> , 1948; <i>Le Havre</i> , 1960; <i>Almar</i> , 1964; <i>Tegean</i> , 1967. Scrapped at Shanghai, 1969.
110	John G. Tod	January 1944	Dorado, 1947; <i>Glyfada</i> , 1960; <i>Platres</i> , 1969. Scrapped at Instanbul, June 1972.
111	Charles J. Finger	January 1944	<i>St. Thomas</i> , 1947; <i>Cavostaras</i> , 1951; <i>Despina</i> , 1953; <i>Amphithea</i> , 1959; <i>Maratha Explorer</i> , 1964; <i>Samudra Vijay</i> , 1966. Scrapped at Bombay, August 1970.
112	Morris Sheppard	February 1944	<i>Giuliano</i> , 1947; <i>Kopalnia Siemianowice</i> , 1962. Converted in Poland to floating warehouse, renamed <i>MP-PZZ-3</i> , 1966. Arrived for scrapping at Faslane, Scotland, 1978.
113	Katherine L. Bates	February 1944	<i>Coutances</i> , 1947; <i>Mariblanca</i> , 1954. Scrapped at Kaohsiung, April 1969.
114	Jacob Perkins	February 1944	<i>Hai Tee</i> , 1946; <i>Sincere Carrier</i> , 1963; <i>Kondor</i> , 1964. Grounded outside Onahama, July 17, 1966. Refloated but scrapped at Hirao, September 1966.
115	Jose G. Benitez	February 1944	<i>Panagiotis Coumantaros</i> , 1947; <i>Filia</i> , 1965. Collided with MV <i>Tayga</i> at mouth of Red Sea and abandoned at Mokha, January 2, 1967.
116	Robert Henri	March 1944	Scrapped at Baltimore, 1958.
117	Keith Palmer	March 1944	Scrapped at Kearny, New Jersey, August 1968.

Yard Number	Name	Launched	Notes	
118	Anna H. Branch	March 1944	<i>Arthur Stove</i> , 1947; <i>Kostis</i> , 1955. Stranded on Bissagos Island, 230 miles south of Dakar, June 3, 1968. Burned and abandoned.	
119	George Steers	March 1944	Scrapped at Baltimore, c. 1961.	
120	John Gibbon	March 1944	Scrapped at Kearny, New Jersey, July 1968.	
121	Thomas Say	March 1944	<i>Atlantic Trader</i> , 1946; <i>Split</i> , 1962. Scrapped at Split, July 1967.	
122	Isaac Van Zandt	March 1944	Transferred to US Navy in 1966 and loaded with obsolete cargo and explosives for scuttling, 1966. Towed to sea on May 23, 1966 and scuttled; explosives detonated at 4,000-foot depth as planned.	
123	Daniel E. Garrett	April 1944	Transfered to US Army and converted to aircraft repair ship. <i>Major General Robert Olds</i> , 1944. Reverted to former name, 1946. Scrapped at Baltimore, April 1960.	
124	Christopher S. Flanagan	April 1944	Scrapped at Portland, Oregon, November 1963.	
125	John Ireland	April 1944	Scrapped at New Orleans, March 1967.	
126	Henry M. Robert	April 1944	<i>Atlantic Wind</i> , 1946; <i>Wind</i> , 1953; <i>Galini</i> , 1960. Scrapped at Kaoshiung, February 1968.	
127	Sul Ross	April 1944	<i>Astra</i> , 1947; <i>Sil</i> , 1963. Scrapped at Kaoshiung, February 1968.	
128	Julius Olsen	April 1944	<i>Blue Grass State</i> , 1947; <i>Auburn</i> , 1955; <i>Marshall</i> , 1957; <i>Marieileen</i> , 1961. Deck and hull plating cracked under heavy weather while en route from Vancouver to Ceylon, January 1967; sold to Japanese shipbreakers in March 1967. Scrapped at Kaoshiung, December 1968.	
129	Felipi de Bastrop	April 1944	Scrapped at Tampa, Florida, February 1961.	
130	Richard O'Brien	May 1944	Converted to US Army aircraft repair ship <i>Brigadier</i> <i>General Asa N. Duncan</i> , 1944. Returned to Maritime Commission under original name, 1946. Reserve Fleet; scrapped at Burriana, Spain, December 1972.	
131	O. B. Martin	May 1944	Reserve Fleet; arrived at Kaoshiung for scrapping, April 1973.	
132	Henry D. Lindsley	May 1944	Reserve Fleet; scrapped at Bilbao, October 1970.	
133	Minor C. Keith	May 1944	 Governor Brandon, 1947; Aktion, 1949; Omega, 1951; Omnium Freighter, 1954; lengthened at Yokohama, 1957; Omnium Trader, 1965; Thor, 1968. Scrapped at Yawata, Japan, August 1969. 	
134	Nicholas D. Labadie	May 1944	Scrapped at Mobile, May 1962.	
135	Arthur St. Clair	May 1944	Scrapped at Wilmington, North Carolina, May 1963.	
136	Rufus Choate	May 1944	Reserve Fleet; scrapped at Santander, February 1971.	

Yard Number	Name	Launched	Notes	
137	Gus W. Darnell	May 1944	Damaged by Japanese aerial torpedo off Samar, the Philippines, and beached, November 23, 1944. Refloated but declared CTL. Later repaired and taken over by US Navy and renamed <i>Justin</i> , IX 228. Returned to WSA under original name, January 1946. Reserve Fleet; scrapped at Terminal Island, June 1954.	
138	Eleazar Lord	June 1944	Scrapped at Richmond, California, 1967.	
139	Juan N. Seguin	June 1944	Scrapped at New Orleans, September 1966.	
140	Bertram G. Goodhue	June 1944	Scrapped at Richmond, California, 1967.	
141	Oliver Loving	June 1944	Scrapped at New Orleans, June 1970.	
142	Andrew W. Preston	June 1944	<i>Northport</i> , 1951; <i>Abalone</i> , 1957. Lengthened at Tokyo, 1961. <i>Norwalk</i> , 1962. Scrapped at Kaoshiung, September 1969.	
143	Nataniel Scudder	June 1944	 Alfred J. Lyon, 1944. Converted to Army aircraft repair ship Brigadier General Alfred J. Lyon, 1944. Converted to depot ship at Portland, Oregon, 1964. 	
144	John B. Hamilton	June 1944	Reserve Fleet; scrapped at Panama City, August 1976.	
145	Nataniel Silsbee	June 1944	Reserve Fleet; scrapped at Brownsville, Texas, June 1972.	
146	Robert Watchorn	July 1944	American Robin, 1947; Pacific Star, 1957; Rover, 1960; Hwa An, 1960. Scrapped at Kaoshiung, March 1968.	
147	Thomas Guardia	July 1944	Scrapped at New Orleans, 1964.	
148	Laura Drake Gill	July 1944	Hawaiian Lumberman, 1947; Cape Henry, 1960; Trikeri, 1962; Dahlia, 195. Scrapped at Kaoshing, February 1967.	
149	Angus McDonald	July 1944	Scrapped at Seattle, October 1969.	
150	Wynn Seale	July 1944	Sold, vessel stripped and converted to crane barge <i>Zidell's Delight</i> , May 1964. Used at Zidell's ship breaking yard at Portland, Oregon.	
151	T. E. Mitchell	July 1944	Scrapped at Portland, Oregon, January 1970.	
152	Carlos J. Finlay	August 1944	Reserve Fleet; scrapped at Brownsville, Texas, September 1970.	
153	Kyle V. Johnson	August 1944	Reserve Fleet; scrapped at Panama City, 1975.	
154	Jacob A. Westervelt	August 1944	Reserve Fleet; scrapped at Panama City, December 1972.	
155	Robert S. Lovett	August 1944	Western Rancher, 1951; Chryssi S. M., 1954. Scrapped at Hamburg, September 1965.	
156	Ida Strauss	August 1944	Scrapped at Baltimore, March 1960.	
157	Thomas Bulfinch	August 1944	Reserve Fleet. Sold to shipbreakers in Portland, Oregon, in 1971 but resold and converted to a non- seagoing fish processing plant at Dutch Harvbor, Alaska, 1971.	

Yard Number	Name	Launched	Notes	
158	Lorado Taft	August 1944	Scrapped at Philadelphia, September 1966.	
159	Howard L. Gibson	September 1944	While en route from Galveston to Karachi, collided with tanker <i>Geo. W. McKnight</i> 250 miles NW of Madeira and caught fire, October 14, 1944. Reboarded the next day and towed to Casablanca and then New York. Declared CTL and scrapped at Philadelphia, October 1945.	
160	Thomas Eakins	September 1944	Scrapped at Baltimore, August 1960.	
161	Robert E. Clarkson	September 1944	Scrapped at Portland, Oregon, January 1965.	
162	Irving Babbitt	September 1944	Scrapped at Philadelphia, September 1961.	
163	Michael J. Owens	September 1944	 Scrapped at Hinaderpina, September 1901. Polarus Trader, 1949; Burco Trader, 1950; Montego Sun, 1960; Diskos, 1961. Grounded at Panama City, Florida on November 2, 1961. Refloated but heavily damaged. Scrapped at Hirao, May 1962. 	
164	Edward G. Janeway	September 1944	<i>Santa Venitia</i> , 1951. Main deck fractured and machinery trouble in heavy weather, December 30, 1963. Temporarily repaired and sold; scrapped at Oppama, Yokosuka, September 1964.	
165	Herbert D. Croly	September 1944	Reserve Fleet; scrapped at Tacoma, Washington, July 1970.	
166	Frederic C. Ives	October 1944	<i>Rana</i> , 1947; <i>Turmoil</i> , 1952; <i>Valiant Power</i> , 1959; <i>Pantazis L.</i> , 1960. Scrapped at Hirao, August 1968.	
167	Walter Wellman	October 1944	Reserve Fleet; scrapped at Kearny, New Jersey, May 1972.	
168	Richard J. Hopkins	October 1944	<i>Atlantic Water</i> , 1951; <i>Koumiotissa</i> , 1962; <i>Agia Erini</i> <i>L.</i> , 1963. Foundered at 30.22° N, 153° E, after developing hull fractures and leaks in heavy weather.	
169	J. D. Yeager	October 1944	Scrapped at Kearny, New Jersey, April 1967.	
170	Johnny Appleseed	October 1944	Scrapped at Philadelphia, March 1964.	
171	Paul Bunyan	October 1944	Scrapped at Philadelphia, October 1971.	
172	Anson Mills	October 1944	Reserve Fleet; scrapped at Bilbao, January 1971.	
173	Robert Neighbors	October 1944	Scrapped at Bilbao, July 1970.	
174	Francis B. Ogden	November 1944	Scrapped at Kearny, New Jersey, August 1965.	
175	Edwin S. Nettleton	November 1944	Reserve Fleet; scuttled as an artificial reef off Brunswick, Georgia, May 19, 1975.	
176	Pontus H. Ross	November 1944	Scrapped at Portland, Oregon, May 1969.	
177	Clarence Roberts	November 1944	Scrapped at Philadelphia, December 1971.	
178	Otis E. Hall	November 1944	Scrapped at Oakland, California, January 1968.	
179	Charles L. McNary	November 1944	Scrapped at Terminal Island, April 1966.	
180	Cyril G. Hopkins	November 1944	Completed as <i>Navarchos Koundouriotis</i> . Grounded and broke in two while leaving Mar del Plata for Marseilles, October 20, 1964. Sold locally for scrapping.	

Yard Number	Name	Launched	Notes	
181	I. B. Perrine	November 1944	Completed as <i>Eleftheria</i> . Mined in the North Sea, March 23, 1945. Total loss. Wreckage dispersed, 1952.	
182	Paul David Jones	December 1944	Scrapped at Panama City, 1967.	
183	Will B. Otwell	December 1944	Scrapped at Panama City, December 1964.	
184	Jacob Chandler Harper	December 1944	Scrapped at Santander, April 1970.	
185	Harold D. Whitehead	December 1944	Sold commercial, 1951. <i>Jackie Hause</i> , 1959; <i>Gloria Dunaif</i> , 1960; <i>Rainbow</i> , 1960. Lengthened at Tokyo, 1961; <i>Asidos</i> , 1968. Scrapped at Chittagong, December 1969.	
186	Clyde Austin Dunning	December 1944	Boy, 1951; Joan O'Berg, 1958; Eldmere, 1961; Ocean Merchant, 1961; Union Skipper, 1963. Scrapped at Kaoshiung, November 1969.	
187	James Kyron Walker	December 1944	Reserve Fleet. Sold December 1972 to Dutch buyers; resold and arrived Burriana, Spain, for scrapping, February 1973.	
188	Walter Frederick Kraft	December 1944	Global Farmer, 1947; Evergreen State, 1947; Marcel M. H., 1955. Scrapped at Aioi, June 1967.	
189	William R. Lewis	December 1944	Polarus Carrier, 1950; <i>Norcoba</i> , 1950; <i>Evicynthia</i> , 1954. Lengthened at Innoshima, 1956. <i>Spartan</i> , 1961; <i>Elaine</i> , 1962. Scrapped at Onomichi, January 1968.	
190	William Asa Carter	January 1945	Scrapped at Panama City, December 1961.	
191	James Roy Wells	January 1945	Seapioneer, 1951; Lamyra, 1952; Cosmos Betelguese 1963. Scrapped at Kaoshiung, February 1968.	
192	William K. Kamaka	January 1945	Scrapped at Kearny, New Jersey, December 1967.	
193	Daniel L. Johnston	January 1945	Scrapped at Panama City, February 1963.	
194	Lloyd S. Carlson	January 1945	Mary Adams, 1951; Wind Rush, 1955; Debardeleben Marine I, 1959. Converted at Baltimore in 1960 to bulk chemical carrier. Returned to US Government in 1968 in exchange for C-4 troopship General W. C. Langfitt. Scrapped at New Orleans, March 1970.	
195	Russell R. Jones	January 1945	<i>Pegor</i> , 1951; <i>Pacific Wave</i> , 1958; <i>Ching Yung</i> , 1960. Scrapped at Kaoshiung, February 1967.	
196	John Martin Miller	January 1945	Reserve Fleet; scrapped at Brownsville, Texas, May 1971.	
197	Wallace M. Tyler	February 1945	<i>Seastar</i> , 1951; <i>Archon</i> , 1960. Scrapped at Edajima, Japan, November 1966.	
198	William W. Johnson	February 1945	<i>Seagarden</i> , 1951. Grounded off Tabago, April 17, 1961. Refloated but severely damaged. Sold and scrapped at Bibao, September 1961.	
199	Bernard L. Rodman	February 1945	<i>Seafighter</i> , 1951; <i>Meldia</i> , 1953; <i>Jupiter</i> , 1967. Grounded and abandoned at Cabo San Lazaro, Mexico, March 29, 1968.	

Yard Number	Name	Launched	Notes	
200	Leonardo L. Romero	February 1945	<i>Chian Trader</i> , 1951; <i>Coal Miner</i> , 1957; <i>Peter Blix</i> , 1960. Lengthened at Tokyo and renamed <i>Meteor</i> , 1961. <i>Asitres</i> , 1968. Scrapped at Chittagong, January 1970.	
201	Willard R. Johnson	February 1945	<i>Neptunus</i> , 1951; <i>Apollo</i> , 1952; <i>Evimar</i> ; 1954; <i>Theokeetor</i> , 1958; <i>Riverhead</i> , 1964; <i>Maru</i> , 1965. Scrapped at Hong Kong, April 1967.	
202	Samuel L. Jeffrey	February 1945	Damaged on war service, 1945, and laid up at Mobile. Declared CTL. Scrapped at Port Arthur, Texas, 1947.	
203	Clifford E. Ashby	February 1945	Peconic Bay, 1951; Trojan Trader, 1952; Armonk, 1957; Marine Rice Queen, 1960. Sello Rojo, 1963; Alnfield, 1964. Reported as Ceres, 1967. Scrapped at Vado as Alnfield, April 1967.	
204	Alfred L. Baxlay	February 1945	Completed as <i>Lektor Garbo</i> . <i>N. O. Rogenaes</i> , 1947; <i>Kalu</i> , 1960. Scrapped in Brazil, April 1973.	
205	Francis E. Siltz	March 1945	 Portland Trader, 1947. Grounded on Tubbataha Reef, 400 miles south of Manila, on January 5, 1961. Refloated but declared CTL. Sold and scrapped at Hong Kong, April 1961. 	
206	Charles H. Lanham	March 1945	<i>Thunderbird</i> , 1951; <i>Watling</i> , 1961; <i>New Kailing</i> , 1963. Scrapped at Kaoshiung, December 1967.	
207	Mark A. Davis	March 1945	Completed as <i>Psara</i> . Scrapped at Osaka, Japan, May 1967.	
208	Edward N. Hinton	March 1945	<i>Les Andelys</i> , 1947; <i>Cormorant</i> , 1954. Scrapped at Onomichi, June 1969.	

LIBERTY SHIPS AND THE TEXAS ARTIFICIAL REEF PROGRAM

The stripped hulls of 12 World War II Liberty ships lie quietly on the bottom of the Gulf of Mexico off the Texas coast. Merchant marine and navy sailors no longer clamor about their decks, keeping a wary eye out for enemy ships, planes, and submarines. Instead, encrusting corals, tunicates, and other invertebrates gently carpet the ships' steel plating and bulkheads, while large predators like groupers, snappers, and sharks lurk about the dark recesses of the ships keeping a hungry eye out for a meal. This epitaph for these proud ships not only keeps their memory and history alive, but allows them to continue to serve citizens by enhancing marine habitat as artificial reefs through Texas Parks and Wildlife's Artificial Reef Program (Reef Program).

In an ironic twist of fate, the Liberty Ships which survived enemy sinking attempts during World War II were intentionally sunk as artificial reefs in the Gulf of Mexico during the mid-1970s. In the Gulf of Mexico, natural hard bottom habitat is limited. The majority of bottom substrate is sand or silty clay. There are few natural coral or rock formation reef areas such as the East and West Flower Garden Bank Sanctuaries. Twenty-five percent of hard bottom habitat available is created by the steel legs of nearly 4,000 petroleum platforms. Although the majority of these platforms are located offshore of Louisiana, approximately 800 platforms are located in Texas waters. These platforms, Liberty Ships, and other artificial material have provided habitat for reef fish and a unique source of recreational opportunities for Texas divers and anglers.

In 1972, the United States Congress offered surplus Liberty Ships in its Reserve Fleet to several coastal states for use as artificial reefs. Texas acquired 12 Liberty Ships and placed them at five sites during 1975-76 to create habitat for marine organisms. These Liberty Ship Reef sites formed the foundation of the Reef Program.

With the passage of the federal Abandoned Shipwreck Act of 1987, Texas was required to provide appropriate private sector access to shipwrecks in state waters, and develop cultural education about these wrecks. In 1994, Texas Parks and Wildlife and the Texas Historical Commission jointly accepted the challenge to designate the ships in the Liberty Ship Reefs as historical heritage sites. The Liberty Ships in Texas readily attract sport fishermen and divers, offering them a dual encounter with magnificent reefs and America's maritime heritage.

Acquisition of Texas' Liberty Ships

The process of Texas acquiring and sinking 12 obsolete WWII Liberty Ships was a long and interesting one. The following historical information documenting the acquisition of the ships, determination of reef sites, and sinking process was taken from Schwartz (1980)⁶ unless otherwise noted.

On August 22, 1972, the 92nd Congress passed and the President signed the Appropriations Authorization-Maritime Programs Bill which became known as Public Law 92-402. This law allowed for the transfer of surplus World War II Liberty Ships that were designated as scrap to coastal states that indicated they would use them as artificial reefs. Telegrams were sent out to state governors offering the ships as artificial reefs. Then-Texas Governor Preston Smith did not respond. On December 11, 1972, Governor Smith's office received a duplicate telegram asking about Texas' interest in applying for ships under the public law. Three days later, the Governor's Legal Counsel sent a copy of the telegram to Clayton T. Garrison, Executive Director of TPW with the comment, "If you are not interested in the offer of the Liberty Ships, and you are aware of a state agency or commission that could use them, I suggest you forward this information to them." TPW responded five days later by stating they had no intention of applying for the ships because, according to TPW Commissoner Pierce Johnson, of the lack of available funds.

During this time, a Corpus Christi dentist named Tom Johnson, became interested in the Liberty Ships after seeing an article in a diving magazine advertising the ships availability for artificial reefs. He contacted Dr. Carl Oppenheimer at the University of Texas Marine Sciences Laboratory (Port Aransas) for more information. Dr. Oppenheimer informed Tom Johnson that Texas had been offered the ships but Governor Smith had declined them on the recommendation of TPW. However, the Texas Coastal and Marine Council (TCMC)⁷ was studying their possible use as reef material.

The State Senate passed Resolution No. 162 authorizing the Senate interim committees to review the matter of using the Liberty Ships for the

⁶This history of the Liberty Ship program in Texas is taken from the detailed historical research in John Schwartz' Texas A&M University (College Station, Texas) masters thesis from entitled: A public program analysis of operations and impacts of the Texas Liberty Ship Reef Program (1980).

⁷The Texas Coastal and Marine Council, also known as the Texas Council on Marine-Related Affairs was established by the 62nd legislature to serve as an advisory body to assist the legislature in the assessment and planning of coastal resources management and other marine concerns in the state. The 12 members were appointed by the Governor. The Council was abolished September 1, 1985 following recommendations of the Sunset Advisory Commission and the management of the Liberty Ship Reef Sites forwarded to TPW.

State of Texas. This was referred to the TCMC. TCMC member Cecil Reid reported on the availability of the ships under P.L. 92-402 on February 23, 1973 in a public meeting. Tom Johnson had petitioned the local diving community and others and presented a petition with 1,000 signatures in support of initiating a Liberty Ship program. The Council was impressed with this show of public support and instructed staff to pursue the feasibility of the program. On February 27, 1973, Senator A.R. "Babe" Schwartz sent a letter to newly elected Governor Dolph Briscoe to notify the Maritime Administration (MARAD) that Texas was interested in some of the surplus ships in the Beaumont (TX) Defense Reserve Fleet. The Governor's office responded to MARAD on March 29, 1973 via telegram that Texas was interested in some of the Reserve Fleet vessels. TCMC staff then decided that a workshop composed of a multidisciplinary task force would provide valuable information on the technical, political and social problems associated with instituting the reef program. The workshop was held in Corpus Christi on March 23 and 24, 1973.

Much of the discussion at the workshop dealt with procedural matters. The EPA representative gave general guidelines as to the kind and amount of cleaning these ships would require before certification as "clean" could be made. Other topics discussed included site selection, ship preparation considerations, and continuing the reef program. The workshop provided needed information for Council staff members to consider. While the TCMC was studying the use of Liberty Ships as offshore artificial reefs, the scrap steel industry was pressuring the U.S. Department of Commerce to release the remaining ships for scap.

With pressure from the U.S. Department of Commerce for states to make a decision regarding the ships, Joe C. Moseley and Howard T. Lee (TCMC staff) were challenged with deciding how many ships Texas could use. Mr. Lee determined that due to the four major population centers and jettied entrance channels along the Texas coast and water depths offshore, four reef locations should be used: Freeport/Galveston area, Port Lavaca/Port O' Connor area, Corpus Christi/Port Aransas area, and Port Mansfield/Port Isabel area. To ensure the sites were large enough to sustain fish populations, they decided each reef site should have three ships sunk parallel 300 to 500 feet apart. A resolution from the Council to the Governor was then made requesting 12 of the 18 ships from MARAD. The Governor's office sent a letter requesting the ships on April 15, 1973.

On May 10, 1973, Senator Schwartz introduced Senate Concurrent Resolution (SRC) No. 102 which directed TPW and TCMC to construct artificial reefs using surplus Liberty Ships. The Governor signed the resolution on May 28. Now, under legislative mandate, TPW was directed to construct reefs but questioned whether state funds could be expended on programs outside state waters. An official opinion from the State Attorney General's office was requested by TPW in June 1973. The Attorney General's office issued Opinion No. H-101 on September 12, 1973 stating "...the State of Texas may fund and erect artificial reefs in that area with funds from the Special Game and Fish Fund, provided the Legislature enacts an appropriation for that purpose." The statutory authority of the TCMC was different than that of a state agency such as TPW, so the applicability of the Attorney General's opinion was not the same. The TCMC continued the program without any direct appropriations for a program.

Determination of Artificial Reef Sites

The next series of steps involved TCMC determining sites for the ships. The Council had obtained a great deal of information from the previous workshop at Corpus Christi. On a chart, 30-mile arcs were drawn from each jettied entrance channel near a population center. U.S. Army Corps of Engineers' (Corps) guidelines recommended a 50 feet clearance above the reef. To defray costs, it was decided that the ships would be cut down to about 27 feet. If the ships rolled to the side, they would be around 56 feet tall. After consideration, the TCMC set 100 feet as the minimum depth. Contour lines of 100-110 feet were then located on the chart. The shallow slope of the continental shelf in the northern areas of Texas were well out-side the 30-mile range and this is why Beaumount/Port Arthur and Galveston

areas did not receive reefs. For Beaumont/Port Arthur, the reef would have had been over 100 miles offshore to meet depth requirements. Next, they looked for any snags or obstructions and pipelines. Once suitable areas were located, bottom substrates were investigated to assure stability for the ships. Finally, sites were designated as an area that was 1/2 mile square with three ships to be sunk parallel about 300 to 500 feet apart.

Two public hearings were held by TCMC to assure that no objections to the program remained. One was held in Houston on October 3, 1973 and the other in Corpus Christi on October 4, 1973. Public response was generally favorable. On October 19, 1973, TCMC Executive Director Joe Moseley was authorized to submit an application to MARAD. Environmental Protection Agency (EPA) certification, Corps permits, and U.S. Coast Guard buoying permits were needed prior to submission for ship transfer. In order for the TCMC to comply with the clean ship criteria as set forth in Federal Water Pollution Control Act Amendments of 1972 (P.L. 92-500), they had to include a complete description of the preparation process including oil removal and tank cleaning in the MARAD application. EPA issued a letter of certification to the State of Texas on January 14, 1974 with the understanding that the salvage contractor would fully comply with the provisions within the preliminary application.

The Liberty Ship reef program also required Corps permits for each reef location. Applications for permits were sent on December 14, 1973. The three southernmost reef site locations were amended after comments from the shrimping industry. The most difficult objections came from the U.S. Geological Survey (USGS) and the U.S. Bureau of Land Management (BLM). Three objections were made to the TCMC by these two agencies: 1.) the ships should be anchored bow and stern to preclude any possible movement during a hurricane; 2.) the ships should be positioned for sinking using Raydist of Hi-Fix Navigation Systems instead of LORAN; and 3.) the ships should be placed in a location where they would not interfere with the future development of the petroleum leases. Only the last objection caused a problem for the TCMC, because it was not clear how and why the proposed reef locations interfered with petroleum leases. The

TCMC contacted the Offshore Operator's Committee who felt the likelihood of all southern sites being situated on potential well locations was remote. After further negotiations with the USGS and BLM, the Corps wrote a letter to both agencies requesting further information on their objections to the reef locations. By July 2, 1974, it was felt that the USGS and BLM objections were arbitrary and capricious, Texas Senator Schwartz encouraged Texas Congressmen to call and write the Secretary of the Interior, Special Assistant to the Secretary of the Interior, and Heads of the USGS and BLM. On July 23, 1974, the Acting Manager of the Gulf of Mexico Operations in the BLM wrote a memo stating they had new information showing that the proposed reef sites posed no problem with potential oil leases. About one week later, the Corps permits were issued.

On October 11, 1974, the final application for the release of the Liberty Ships to Texas was sent to MARAD. Copies of the application were provided to the Secretary of Interior, Secretary of Defense, and other appropriate federal agencies by the Secretary of Commerce under Section 3(c) of P.L. 92-402. No problems were expected since all the federal permits were included in the application this time. However, the National Park Service (NPS) objected because the application did not contain a complete survey of the area using magnetometers, profilers and side-scan sonar to determine if the reef locations contained historic sites.

The TCMC did not have the funds for such a survey and requested the Executive Director of the Texas Historical Commission (THC) to make a position based on historical knowledge. The THC determined it was very unlikely that the proposed locations contained any significant cultural resources and did not object to the project. The NPS did not accept this position. Mr. Lee of TCMC then called the Special Assistant to the Secretary of the Interior and explained the situation with the understanding that the TCMC was prepared to request from the Texas Congressional Delegation as they did in getting the Corps permits. The Special Assistant stated he would look into the problem, and three days later called to state that all problems had been resolved. On March 14, 1975, MARAD informed the TCMC that the Secretary of Commerce had approved the application.

Sinking Process

With final approval of the application, the TCMC began soliciting bids from contractors for the preparation of the Liberty Ships for sinking. Each contractor was to bid on : 1) towing the vessel from the Defense Reserve Fleet at Beaumont to the contractor's ship yard; 2) remove all contaminants from vessel tanks and compartments to meet EPA requirements; 3) remove as much nonferrous material as possible; 4) remove everything above the second deck (27 foot mark) or more dependent on Council desires; 5) deploy a temporary buoy on each vessel prior to sinking; 6) tow and sink each vessel in a keel down position; and 7) place 3,000 pound anchors at each ship's bow and stern.

Contractor's specifications were given out at a meeting in Houston on March 26, 1975. On the last day of the bid process, two bids were hand delivered: one from Andy International, Incorporated of Brownsville, Texas and the other from Consolidated Steel Corporation in conjunction with Alberti Equipment, Incorporated from Brownsville and Port Lavaca, respectively. Andy International, Incorporated won the bid by giving a work schedule of 189 days for a total of \$423,996 for all 12 ships. The final service contract was signed on May 7, 1974 and work began May 23 on the first ship, the *Edward W. Scripps* (Figure 40). By August 6, 1975, all 12 Liberty Ships assigned to Texas had been released to Andy International.

At the time of sinking, the hulls of the Liberty ships were in the following condition: all hull plate and superstructure above the tween deck removed; all piping, wiring, propulsion gear, rudder, hull and compartments aft of the steering post removed; and fuel and ballast tanks cleaned, filled, and sealed. Large holes were cut along the side walls of each ship to facilitate water flow once the ship was on the bottom (Figures 41-51). On August 22, 1975, the *Edward W. Scripps* was the first ship sunk and was placed at the Port Mansfield reef site. The 11 remaining ships were sunk at various sites through October 29, 1976 (Table 1).

No significant problems were encountered during the sinking process with the exception of the *George Vancouver*, the last ship of the entire project. The *Vancouver* was towed to the Freeport Liberty Ship reef on October 27, 1976. Winds were intense and 7 to 9 foot swells were present at the Freeport jetty. The U.S. Coast cutter *Point Monroe*

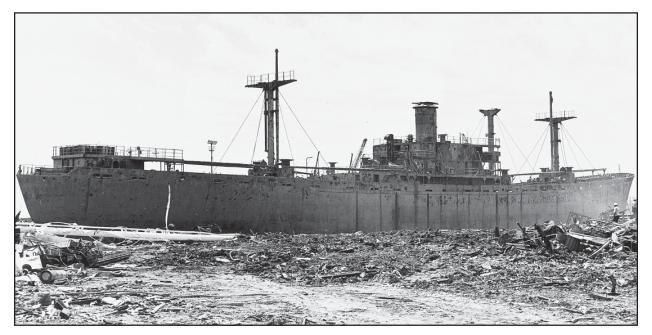


Figure 40. One of the twelve Liberty Ships awaiting the cutting tourch at Andy International, Incorporated's ship breaking yard in Brownsville, Texas. The ships were cut down for sinking to serve as artificial reefs in a program carried out by the Texas Coastal and Marine Council in 1975.76 (Texas Coastal and Marine Council 1975).

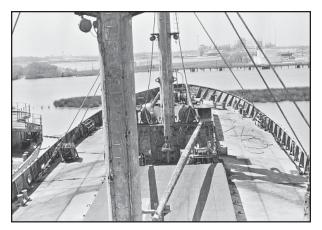


Figure 41. The super structure and all masts and posts were removed from the Liberty Ships (Texas Coastal and Marine Council 1975).

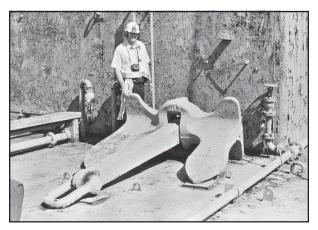


Figure 44. Artifacts such as this anchor were salvaged and sold or donated to various organizations (Texas Coastal and Marine Council 1975).



Figure 42. Sides were removed down to the last deck level (Texas Coastal and Marine Council 1975).



Figure 43. Tons of scrap metal were salvaged from each of the Liberty Ships for recycling (Texas Coastal and Marine Council 1975).



Figure 45. Aerial view of two of the twelve Liberty Ships that were prepared for sinking as artificial reefs. The ship on the right has had the superstructure and main deck removed. Deck openings seen here plus large side windows provide water circulation and access for fish (Texas Coastal and Marine Council 1975).

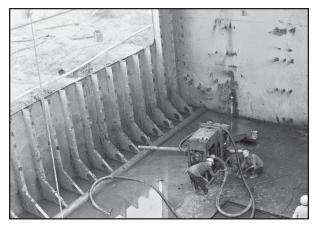


Figure 46. All petroleum products and water were removed by pumps (Texas Coastal and Marine Council 1975).

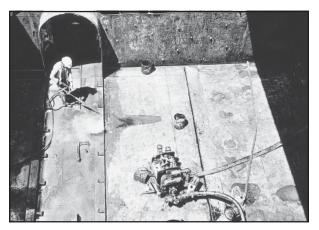


Figure 47. During the final stages of clean-up, the ships were steam cleaned to remove remaining contaminants (Texas Coastal and Marine Council 1975).



Figure 48. Inside view of a cleaned Liberty Ship that is ready for sinking. Note holes in left side to allow for water circulation. (Texas Coastal and Marine Council 1975).



Figure 49. Cuts made in the hull of a Liberty Ship provided adequate water circulation and access for fish when the ship rested on the bottom of the Gulf of Mexico (Texas Coastal and Marine Council 1975).



Figure 50. Settling stern-first into the 100 foot deep water of the Gulf of Mexico, this Liberty Ship hull provided habitat for marine organisms and enhanced harvest by fishermen in the area (Texas Coastal and Marine Council 1975).



Figure 51. With the stern already resting on the bottom, the bow of this Liberty Ship submerged to form a part of an artificial reef (Texas Coastal and Marine Council 1975).

Reef Name	Ship Names with Date of Sinking	Water Depth (ft)	Depth to Wrecks (ft)
Freeport Liberty Ship Reef	<i>William H. Allen</i> (September 23, 1976); <i>B.F. Shaw</i> (June 19, 1976); <i>V.A. Fogg</i> (non- Liberty Ship – February 1, 1972)	100-102	70-80
Matagorda Island Liberty Ship Reef	Jim Bridger (June 15, 1976); George Dewey (April 25, 1976); Dwight L. Moody (April 6, 1976)	105-107	85-105
Mustang Island Liberty Ship Reef	Conrad Weiser (January 28, 1976); Rachel Jackson (March 8, 1976); Charles A. Dana (March 23, 1976)	108-111	82-109
Port Mansfield Liberty Ship Reef	<i>Edward W. Scripps</i> (August 22, 1975); <i>Joshua Thomas</i> (November 4, 1975); <i>George L. Farley</i> (October 8, 1975)	96-100	85
Vancouver Liberty Ship Reef	George Vancouver (October 29, 1976)	60	33
John Worthington	John Worthington (WWII Tanker – July 21, 1943)	25	10

 Table 1. Ships located at each reef site with water depth information (Mean Lower Low Water).

was slightly damaged when attempting to place an Andy International worker onboard the Vancouver to set the explosives. After all attempts failed to place a person onboard, the Monroe returned to port, but the tug boat towing the *Vancouver* was unable to enter Galveston jetty due to high seas. The tug was diverted southeast to shallower water. The shackle of the stern anchor on the Liberty Ship broke, dropping the 3,000 to 4,000 pound anchor over the side. During the next night, wind gusts reached 50 mph. The *Vancouver* drug its anchor and the tug boat down the coast to a point 9 miles southwest of Freeport where it sank in approximately 60 feet of water. After public testimony and meetings with the West Gulf Maritime Association, the Corps issued a permit to the TCMC to leave the ship at its current position. Presently, TPW maintains a permanent buoy to mark the site.

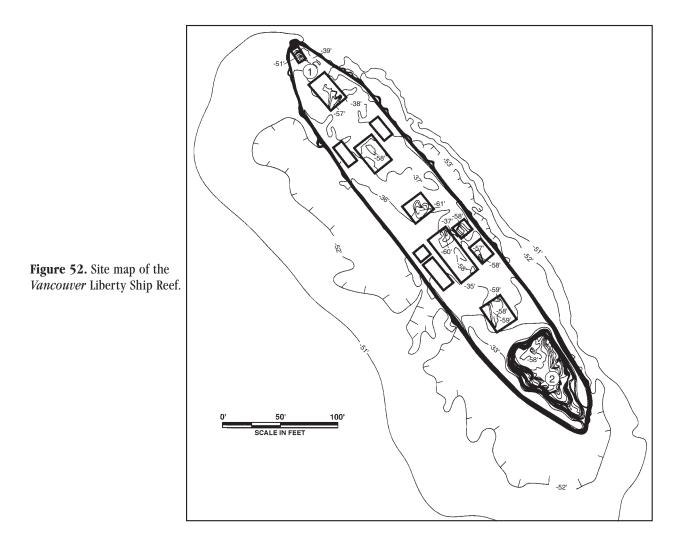
At the Freeport Liberty Ship Reef, the *V.A. Fogg* (which sank accidentally) was flattened out by explosives after sinking to eliminate a hazard to navigation. In addition, the *John Worthington*, located in the intracoastal waterway at Port Aransas,

was initially exposed above the water and later deteriorated and fell apart over the years.

Location

There are five locations off the Texas coast where the public can visit the remains of Liberty Ships (Figures 52-61). Area maps presented include other reef materials present in addition to the Liberty Ships.

The coordinates presented are the result of surveys with Differential Global Positioning Systems (DGPS). The systems are extremely precise, achieving accuracy of from three to five meters. Relocating the sites with GPS systems is a simple matter. John Chance and Associates, Inc. (Lafeyette, LA), a member of the FUGRO group of companies, surveyed the reefs under contract to TPW in 1995, except for the *Vancouver* site which was surveyed by NOAA. The ex-WWII tanker *John Worthington* was surveyed by Coastal Environments, Inc (Figures 62-63). The information, maps, and side scan sonar data presented in this section are taken from those survey reports.



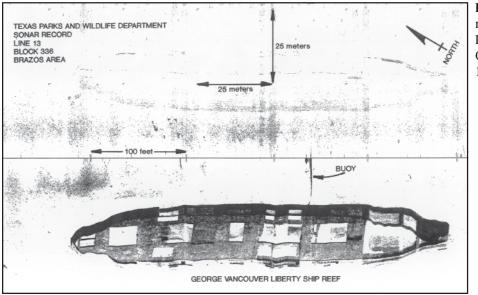


Figure 53. Side scan sonar record of the *Vancouver* Liberty Ship Reef (John Chance and Associates 1995).

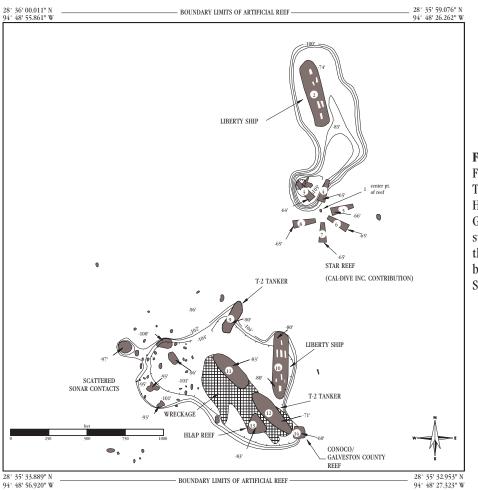


Figure 54. Site map of the Freeport Liberty Ship Reef. The triangle represents the HL&P Reef. The square is the Galveston County/Conoco structure. The Star Reef is the cluster of oil rigs between the two Liberty Ships.

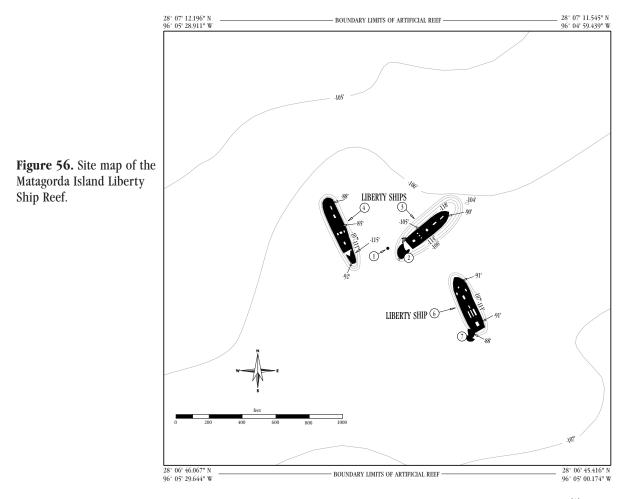
28° 35' 33.889" N 94° 48' 56.920" W

Using the NAD83 datum set, the center point of the Freeport Liberty Ship Reef is located at 28° 35' 46.485" N and 94° 48' 41.605" W (Galveston Block A-22). This point can be reached by sailing 36 nautical miles on a bearing of 122° from the Freeport jetties.

Reef Component	<u>North Latitude</u>	West Longitude	Reef Material
Shaw ⁽²⁾	28° 35' 52.612"	94° 48' 41.782"	Liberty Ship
Allen (10)	28° 35' 38.954"	94° 48' 44.295"	Liberty Ship
V.A. Fogg ^(9,11,12)	28° 35' 36.600"	94° 48' 44.937"	T-2 Tanker
HL&P Reef ⁽¹³⁾	28° 35' 36.065"	94° 48' 45.833"	300 one ton fly ash blocks
Conoco/Galveston County Reef ⁽¹⁴⁾	28° 35' 35.593"	94° 48' 43.358"	Welded pipe structure
Star Reef ⁽³⁻⁸⁾	28° 35' 46.485"	94° 48' 41.605"	Cluster of 6 obsolete petroleum platforms

TEXAS PARKS SIDE SCAN SONA LINE 17 BLOCK 22 GALVESTON ARE FIGURE NO. 1 DEBRIS GALVESTON COUNTY

Figure 55. Side scan sonar record of the Freeport Liberty Ship Reef (John Chance and Associates 1995).



Using the NAD83 datum set, the center point of the Matagorda Island Liberty Ship Reef $^{(1)}$ is located at 28° 06' 58.806" N and 96° 05' 14.542" W (Matagorda Island Block 616). This point can be reached by sailing 21 nautical miles on a bearing of 139° from the Matagorda jetties.

Reef Component	North Latitude	West Longitude
Liberty Ship (2,3)	28° 06' 59.732"	96° 05' 12.035"
Liberty Ship (4,5)	28° 07' 00.183"	96° 05' 17.745"
Liberty Ship (6,7)	28° 06' 55.442"	96° 05' 09.327"

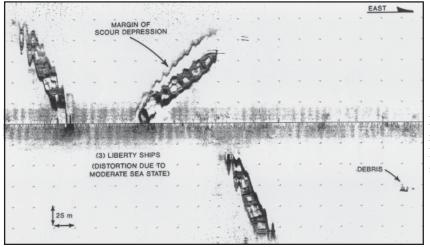
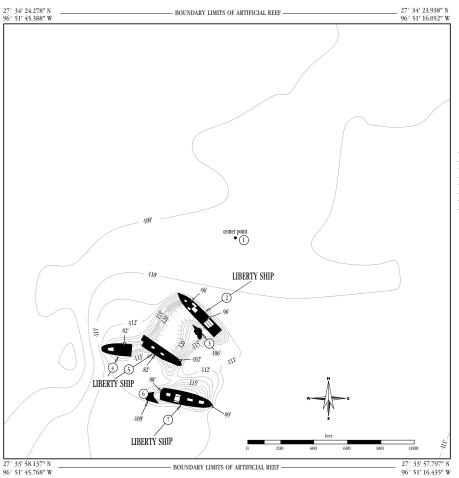
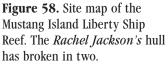


Figure 57. Side scan sonar record of the Matagorda Island Liberty Ship Reef (John Chance and Associates 1995).





Using the NAD83 datum set, the center point of the Mustang Island Liberty Ship Reef $^{(1)}$ is located at 27° 34' 11.038" N and 96° 51' 30.911" W (Mustang Island Block 802). This point can be reached by sailing 18 miles on 141° from the Port Aransas jetties.

Reef Component	North Latitude	West Longitude
Liberty Ship (2,3)	27° 34' 06.516"	96° 51' 33.293"
Jackson (stern) (4)	27° 34' 04.536"	96° 51' 38.605"
Jackson (bow) (5)	27° 34' 04.428"	96° 51' 36.135"
Liberty Ship (6,7)	27° 34' 01.493"	96° 51' 34.482"

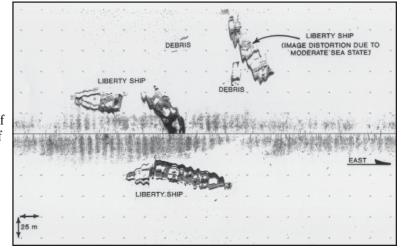


Figure 59. Side scan sonar record of the Mustang Island Liberty Ship Reef (John Chance and Associates 1995).

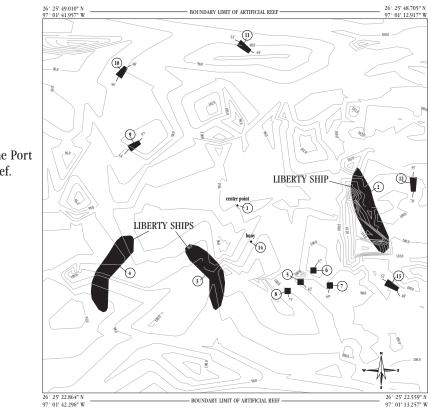


Figure 60. Site map of the Port Mansfield Liberty Ship Reef.

Using the NAD83 datum set, the center point of the Port Mansfield Liberty Ship Reef ⁽¹⁾ is located at 26° 25' 35.785" N and 97° 01' 27.607" W (South Padre Island Block 1070). This point can be reached by sailing 15 nautical miles on a bearing of 110° from the Port Mansfield jetties. A buoy marking the reef is located at 26° 25' 33.199" N and 97° 01' 26.556" W ⁽¹⁴⁾. The Smit America Rigs to Reef donation was composed of two 4-pile jackets that were cut in-half, with each section being placed in a standing position on the bottom at four different locations. The Mobil Rigs to Reef donation was composed of four 4-pile jackets from structures "A" (cut in-half), "B", "C" and "D", with the five structures positioned at different locations.

Reef Component	<u>North Latitude</u>	West Longitude
Liberty Ship (east) (2)	26° 25' 35.597"	97° 01' 17.224"
Liberty Ship (center) ⁽³⁾	26° 25' 31.665"	97° 01' 30.295"
Liberty Ship (west) ⁽⁴⁾	26° 25' 30.503"	97° 01' 38.520"
Smit America's obsolete petr	oleum platforms:	
"A" structure - top (5)	26° 25' 30.304"	97° 01' 22.682"
"A" structure - base (6)	26° 25' 31.098"	97° 01' 21.644"
"B" structure - top (7)	26° 25' 30.016"	97° 01' 20.357"
"B" structure - base ⁽⁸⁾	26° 25' 29.663"	97° 01' 23.708"
Mobil's obsolete petroleum p	platforms:	
"A-1" structure - base ⁽⁹⁾	26° 25' 39.929"	97° 01' 36.087"
"A-2" structure - base (10)	26° 25' 45.089"	97° 01' 36.867"
"B" structure - base (11)	26° 25' 47.379"	97° 01' 27.327"
"C" structure - base (12)	26° 25' 37.639"	97° 01' 13.676"
"D" structure - base (13)	26° 25' 30.179"	97° 01' 15.916"

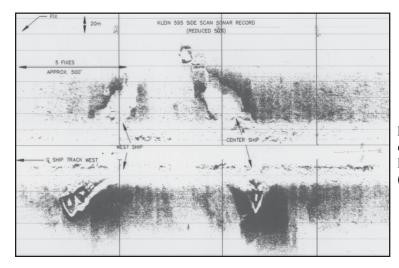


Figure 61a. Side scan sonar record of the center and west ship at the Port Mansfield Liberty Ship Reef (John Chance and Associates 1995).

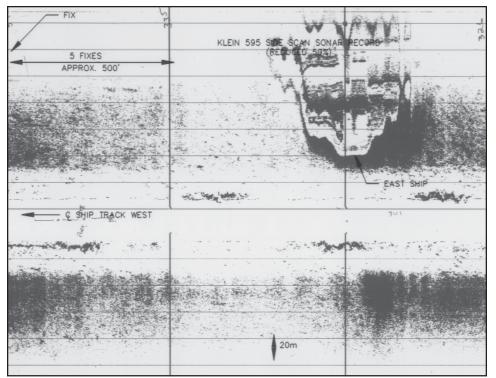


Figure 61b. Side scan sonar record of the east ship at the Port Mansfield Liberty Ship Reef (John Chance and Associates 1995).

Figure 62. Site map of the *John Worthington* wreck (Pearson and Simmons 1994).



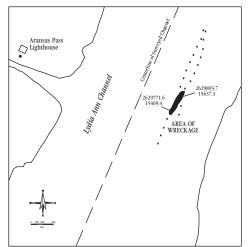


Figure 63. Side scan sonar record of the *John Worthington* wreck (Pearson and Simmons 1994).

Table 2. Center points of each Liberty Ship reef site and the *Worthington* as determined by Differential Geographic Positioning System in North American Datum 1927 and 1983 (NAD27 and 83). Sailing directions are magnetic compass bearings from jettied entrance channels.

Name	Block	Coordinates (NAD27)	Coordinates (NAD83)	Sailing Directions
Freeport Liberty	A-22	28° 35' 45.567" N	28° 35' 46.485" N	36 miles on 122°
Ship Reef		94° 28' 42.485" W	94° 28' 41.605" W	from Freeport
Matagorda Island	616	28° 06' 57.832" N	28° 06' 58.806" N	21 miles on 139°
Liberty Ship Reef		96° 05' 13.701" W	96° 05' 14.542" W	from Matagorda
Mustang Island	802	27° 34' 10.000" N	27° 34' 11.038" N	18 miles on 141°
Liberty Ship Reef		96° 51' 30.000" W	96° 51' 30.911" W	from Pt. Aransas
Port Mansfield	1070	26° 25' 34.535" N	26° 25' 35.785" N	15 miles on 110°
Liberty Ship Reef		97° 01' 26.720" W	97° 01' 27.607" W	from Pt. Mansfield
<i>Vancouver</i>	336	28° 47' 33.152" N	28° 47' 34.817" N	9 miles on 213°
Liberty Ship Reef		95° 20' 50.634" W	95° 20' 52.052" W	from Freeport
John Worthington	Intracoastal	27° 51' 41.204" N	27° 51' 42.296" N	1.5 miles NE of
	Waterway	97° 03' 04.642" W	97° 03' 05.600" W	Port Aransas

Table 3. Locations of individual Liberty Ships and other material at each reef site. Coordinates are foreach ship and other reef components in North American Datum 1927 and 1983 (NAD27 and 83).

		NAD27	NAD27	NAD83	NAD83
Reef Name	Reef Component	North Latitude	West Longitude	North Latitude	West Longitude
Freeport Liberty	Shaw	28° 35' 51.689"	94° 48' 41.059"	28° 35' 52.612"	94° 48' 41.782"
Ship Reef	Allen	28° 35' 38.031"	94° 48' 43.572"	28° 35' 38.954"	94° 48' 44.295"
	V.A. Fogg	28° 35' 37.895"	94° 48' 46.416"	28° 35' 36.600"	94° 48' 44.937"
	HL&P Reef	28° 35' 35.145"	94° 48' 45.110"	28° 35' 36.065"	94° 48' 45.833"
	GV Co./Conoco	28° 35' 34.670"	94° 48' 42.635"	28° 35' 35.593"	94° 48' 43.358"
	Star Reef, center	28° 35' 45.567"	94° 28' 42.485"	28° 35' 46.485"	94° 48' 41.605"
Matagorda Island	Liberty Ship	28° 06' 58.757"	96° 05' 11.193"	28° 06' 59.732"	96° 05' 12.035"
Liberty Ship Reef	Liberty Ship	28° 06' 59.209"	96° 05' 16.903"	28° 07' 00.183"	96° 05' 17.745"
	Liberty Ship	28° 06' 54.467"	96° 05' 08.486"	28° 06' 55.442"	96° 05' 09.327"
Mustang Island	Liberty Ship	27° 34' 05.479"	96° 51' 32.382"	27° 34' 06.516"	96° 51' 33.293"
Liberty Ship Reef	Rachel Jackson				
	stern	27° 34' 03.499"	96° 51' 37.694"	27° 34' 04.536"	96° 51' 38.605"
	Rachel Jackson				
	bow	27° 34' 03.391"	96° 51' 35.225"	27° 34' 04.428"	96° 51' 36.135"
	Liberty Ship	27° 34' 00.456"	96° 51' 33.571"	27° 34' 01.493"	96° 51' 34.482"
Port Mansfield	Liberty Ship, east	26° 25' 34.348"	97° 01' 16.338"	26° 25' 35.597"	97° 01' 17.224"
Liberty Ship Reef	Liberty Ship, center	26° 25' 30.415"	97° 01' 29.408"	26° 25' 31.665"	97° 01' 30.295"
	Liberty Ship, west	26° 25' 29.253"	97° 01' 37.633"	26° 25' 30.503"	97° 01' 38.520"
	Smit America rig	26° 25' 29.055"	97° 01' 21.796"	26° 25' 30.304"	97° 01' 22.682"
	Mobil rig	26° 25' 44.483"	97° 01' 35.414"	26° 25' 39.929"	97° 01' 36.087"
	(5 components – see Fig. 53)				
Vancouver	Liberty Ship (bow)	28° 47' 33.152"	95° 20' 50.634"	28° 47' 36.311"	95° 20' 53.329"
Liberty Ship Reef	Liberty Ship (stern)			28° 47' 33.540"	95° 20' 50.974"

Texas Legislation and the Artificial Reef Program

The formal beginnings of the Texas Artificial Reef Program began with the sinking of the 12 Liberty Ships in 1975-76 and the dissolution of the TCMC on September 1, 1985. Texas Parks and Wildlife inherited the ships and began management of the reef sites. In 1989, the seventy-first Texas legislature directed Texas Parks and Wildlife to develop a state Artificial Reef Plan. Legislation for the Texas Artificial Reef Act is provided under the Texas Parks and Wildlife Code, Chapter 89, (Section 89.001-89.0061).

The Texas Artificial Reef Plan emphasizes using a diversity of materials, and specifically requires that only highly durable, stable, and complex structures in a "form as close to their current form" as possible be used in order to enhance the fishery resources. Many materials meet this criteria, especially petroleum platforms, in terms of complexity, durability, and stability in addition to providing the maximum biological profile in the water column. The Reef Plan also requires that these structures meet EPA clean water standards and be free of hydro-carbons before they can be accepted into the state program (Culbertson 1998).

Also, the Reef Plan gives guidance on reef location criteria in order to provide the optimum benefits to the reef fishery resource and recreational users, while minimizing impacts to other user groups in the Gulf of Mexico. Criteria used in determining optimum reef location include evaluating the biological, hydrographic, geographic, geological, ecological, social and economic factors involved surrounding each potential donation.

Biological activity occurs at all depths. There are deep water natural reefs which enhance the fishery resource as a result of venting, hydrates, oil and gas seepage, and nutrients brought in by currents. In general, the higher the profile of the structure, the better the biological productivity of the reef. Recent research by Quenton Dokken at Texas A&M University and by Dave Stanley at Louisiana State University has documented that the majority of biological activity surrounding a platform structure is above 300 ft (Culbertson 1998).

Hydrographic considerations include evaluating the water depth of the proposed reef site and the structure profile. Geographic considerations include locating reef sites at least two nautical miles from designated safety fairways, and at different distances from shore in accordance with user's preferences. Geological concerns include placing reef materials on stable Gulf bottom sediments and avoiding natural bottom areas. Social and economic considerations have not limited the number of reef sites created in the Gulf of Mexico (Culbertson 1998).

The major component of the Artificial Reef Program is the Rigs-to-Reef program, in which petroleum companies donate their obsolete platforms to build reefs. The Reef Plan gives guidance on how to pay for the costs to the program. Texas legislation requires the donor of a petroleum structure pay 50% of the monetary savings for not having to take the structure back to shore and dispose or recycle it. This money goes into the Artificial Reef Fund and is used exclusively to support research monitoring activities, administration of permits, maintenance of buoys, liability and construction of inshore reef sites. Maintenance of buoys marking each new reef are major costs to the Program.

There are specific checks and balances to the donation procedures. The Reef Plan requires that all potential donations be reviewed by a citizen's advisory committee composed of ten interested user groups in the Gulf of Mexico. This advisory committee allows a forum for minimizing conflicts between user groups before the permitting process begins. The Artificial Reef Advisory Committee is represented by a salt water fishing group, an oil and gas industry representative, the Texas Department of Commerce representing tourism, the Texas General Land Office representing petroleum and mineral leasing interests in state waters, a commercial shrimp fishing organization, a Texas diving club, the Attorney General's Office, a Texas University, an environmental group, and the Texas Historical Commission Department of Antiquities Protection (Culbertson 1998).

Since the Plan was approved, the Department has accepted the donation of 45 oil and gas structures, which have been donated by 28 different petroleum companies. The Department currently maintains 34 different reef sites located in state and federal waters. Other structures at these reef sites include: 12 Liberty Ships and 1 T-2 tanker, a tugboat, 4 barges, a YR-Naval vessel, 44 concrete culverts, 300 fly-ash blocks, 132 reef balls, 50 quarry rocks, a welded pipe structure, and 16 concrete sinkers.

CONCLUSION

Like oases in the desert, sunken Liberty ships provide refuges where animals can find food and shelter. To enhance the marine life in the Gulf, the Texas Artificial Reef Program has placed 45 petroleum platforms, fly ash blocks, pipe, concrete blocks and obsolete ships in 34 different sites along the Texas coast. The Liberty Ships serve as reefs by providing a solid foundation for the growth and attachment of sessile organisms. Colonizing animals grow at such high densities that most of the ships are entirely covered. These underwater food and shelter centers attract other invertebrates and numerous fish species until the whole area is teaming with life. In addition, numerous anglers and divers visit the sites each year to witness the positive effects these historic Liberty Ships have made in enhancing the marine resource.

Texas Parks and Wildlife and the Texas Historical Commission hope to teach the general public about the heroism of the men who sailed on the Liberty Ships, and about the importance these and other merchant marine ships had in World War II. The study of Liberty Ships is an example of how existing shipwrecks can be given an added historical dimension.

REFERENCES

Bunker, John Gorley 1972. Liberty Ships: The Ugly Ducklings of World War II. Naval Institute Press, Annapolis. 1990. Liberty Ships: The Ugly Ducklings of World War II. Ayer Company, New Hampshire. Britton, Beverley L., Lt. Cmdr., USNR 1947. Navy Stepchildren: The Armed Guard. US Naval Institute Proceedings. Dec. 1947. Vol. 73, No.12:1495-1501. Cremer. Peter 1984. U-boat Commander. Translated by Laurence Wilson. Jove, New York. Culbertson, J.C. 1998. Alternative donation options with the Texas artificial reef program. In: Offshore Technology Conference Proceedings. Houston, Texas. May 4-7, 1998. OTC 8789. pp. 421-431. Ditton, Robert B., Alan R. Graefe, Anthony J. Fedler, and John D. Schwartz 1979. Access to and Usage of Offshore Liberty Ship Reefs in Texas. Marine Fisheries Review September 1979: 25-31. Douglas, John Scott and Albert Salz 1943. He's in the Merchant Marine Now. Robert M. McBride & Company, New York. Foster. Mark S. 1989. Henry J. Kaiser: Builder in the Modern American West. University of Texas Press, Austin. Friedman, Norman 1983. US Naval Weapons: Every Gun, Missile, Mine and Torpedo Used by the US Navy from 1883 to the Present Day. Conway Maritime Press, London. Gleichauf, Justin F. 1990. Unsung Sailors: The Naval Armed Guard in World War II. Naval Institute Press, Annapolis, Maryland. Hoehling, A.A. 1990. The Fighting Liberty Ships: A Memoir. The Kent State University Press, Kent, Ohio. Kelshall, Gaylord T.M. 1994. The U-Boat War in the Caribbean. Naval Institute Press, Annapolis.

and David B. Tyler 1951. Ships for Victory: A History of Shipbuilding Under the U.S. Maritime Commission in World War II. The Johns Hopkins Press, Baltimore. Lee, Howard 1979. Liberty Ships. Texas Parks and Wildlife February 1979:2-7. Llovd's of London 1940. Lloyd's Register of Ships. Lloyd's, London. Morison, Samuel Eliot 1956. The Atlantic Battle Won: May 1943-May 1945. Little, Brown, Boston. 1963. The Two-Ocean War: A Short History of the United States Navy in the Second World War. Little, Brown, Boston. 1988. The Battle of the Atlantic, September 1939-May 1943. Little, Brown and Company, Boston. NTSB 1974. Marine Casualty Report: SS V.A. Fogg; Sinking in the Gulf of Mexico on 1 February 1972 with Loss of Life. Report No. USCG/ NTSB-MAR-74-8, National Transportation Safety Board. ADA 000819, National Technical Information Service, U.S. Dept. of Commerce, Washington, DC. Pearson, Charles E. and Joe J. Simmons, III 1994. Magnetometer Survey of the Gulf Intracoastal Waterway (GIWW), Port Aransas to Live Oak Point, Aransas and Calhoun Counties, Texas. Prepared for US Army Corps of Engineers, Galveston District. Coastal Environments, Inc., Baton Rouge, LA. Pitt, Barrie and the editors of Time-Life Books. 1978. The Battle of the Atlantic. World War II Series. Revised Edition. Time-Life Books, Alexandria, Virginia. Robertson, Terence 1979. Escort Commander. Bantam, New York. Sawyer, Leonard Arthur and William Harry Mitchell. 1973, The Liberty ships: the history of the "emergency" type cargo ships constructed in the United States during World War II. David & Charles, Newton Abbot.

Lane, Frederick C., Blanche D. Coll, Gerald J. Fischer,

Schwartz, John Dale

1980. A Public Program Analysis of Operations and Impacts of the Texas Liberty Ship Reef Program. M.S. Thesis, Texas A&M University, College Station.

Snyder, Louis L.

- 1960. *The War: A Concise History, 1939-1945.* Foreword by Eric Sevareid. Julian Messner, Inc., New York.
- Standard Oil company of New Jersey
 - 1946. *Ships of the Esso fleet in World War II.* Standard Oil, New Jersey.

Stewart, I.G.

1992. Liberty Ships in Peacetime, and their Contribution to World Shipping History. Ian Stewart Marine Publications, Rockingham Beach, Western Australia.

Talbot-Booth, E.C., ed.

1949. Merchant Ships 1949-1950: The Book of Reference on the World's Merchant Shipping. McGraw-Hill Book Co., Inc., New York.

US Navy

- 1943. US Navy Standardized Curriculum for NTSch (Armed Guard), First Month's Training. Prepared by Bureau of Naval Personnel Training Division, Standards and Curriculum Section, August, 1943.
- 1944. US Navy Standardized Curriculum: Telephone Talker Curriculum (Three and one-half hour course for Pre-Radio Material Schools). Prepared by Armed Guard School and Standards and Curriculum Division, Training, Bureau of Naval Personnel, October 1944.

- 1945. US Navy Standardized Curriculum: One-Week Aircraft Recognition Course for Armed Guard Enlisted Instructors, Armed Guard School (Shelton), Norfolk, Virginia. Prepared by Armed Guard School and Standards and Curriculum Division, Training, Bureau of Naval Personnel, April 1945.
- 1945. US Navy Standardized Curriculum for Armed Guard School, Enlisted Refresher Training, Four Weeks. Prepared by Armed Guard School and Standards and Curriculum Division, Training, Bureau of Naval Personnel, June 1945.
- 1945. US Navy Standardized Curriculum: Visual Signal Curriculum for Armed Guard Communications (One Week and Four Weeks Course). Prepared by Armed Guard School and Standards and Curriculum Division, Training, Bureau of Naval Personnel and US Naval Armed Guard Center (Pacific), Treasure Island, San Francisco, June 1945.

van der Vat, Dan

1988. The Atlantic Campaign: World War II's Great Struggle at Sea. Harper & Row, New York.

APPENDIX 1. VESSEL STATUS CARDS

Off. #243,221

VESSEL STATUS CARD

Name B.F. SHAW F.B. 308.T		Flag .	AMERICAN	Type CARGO	Former Name	<i>(</i>) <i>-</i>
D.W.T. 10439 - G	ross 7176		Net K380	Bale Cu. 500229	Grain Cu. 562865	Sp. 5
MCEHull No. 1622 B	uilt byOre	gon S.	B. Corp.#663	At Portland, Ore.	Completed 4-17-43	3

Basis to W.S.A. 4-17-43 11:00AM PWT @ Portland, Ore. Del by Builders to U.S.M.C. Prod. Simultaneously to W..S.A. Dav.

Date Allocated	Uperator	Form of Agree.	Port of Delivery	Date and Time Delivered
	Northland Transp. Co. Del. to USMC James River Fleet U. S. Lines Co. (pending del. to US Lines under bb charter)		Lee Hall,Va. Lee Hall,Va.	4-17-43 11:00¥ 10-13-45 12Mid.EST 4-2-47 9:45AM EST
	U. S. Lines Co.			5-9-47 12:01AM EDT
	U.S.Lines Co A.L.Burbank & Co Reserve Fleet	GAA GAA	11	4-10-48 12 Mid 4-13-48 12.p01 AM 4-23-48 12.15 PM
	Pacific Atlantic SS Co. RESERVE FLEET	GAA	Hudson River BEAUMONT	7-20-51 10:00EDST 6-1-52 11:30AMCST
	Artifical Fish Reef Program/State of Virg	inia Purchas	. James River	8/21/75 9:00AmEDT

Off. #243,774

VESSEL STATUS CARD

Name CHARLES A. DANAFlag AMERICANType CARGO EC-Former
NameFixed Ballast 201.5 T
D.W.T.10,617cGross 7176Net 4380Bale Cu.499,573Grain Cu.562,608 Sp12.5MCC Hull No.1991Built by NO. CAROLINA S.B.COC. WILMINGTON, NCempleted
Basis to W.S.A. 7-22-43 11:45PM EWT © Wilmington, N.C. OwnedOwned

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
	R. A. Nickol & Co.	GAA	Wilmington	N.C. 7-22-43
	Norton Lilly Mgm't. Corp. Norton Lilly Mgm't. Corp. Dichman Wright & Pugh Reserve Fleet	Int.BB MC/BB GAA	Norfolk, Va.	11:45PM 7-26-46 12:01AM EDT 9-4-46 12:01AM EDT 7-20-48 4 PM 8-2-48 9.45 AM EST
	Blidberg, Rothchild Co. Reserve Fleet	GAA	Wilmington Beaumont	10-28-51 10:00AMEST 6-19-52 9:00AMCST
	Artifical Fish Reef Program/State of Texas Physically Delivered	Purchas	e Beaumont	6–25–75 7–2–75

Off. #243,475 VESSEL STATUS CARD

				10 A. 10 A
Name CONRAD WEISER	FlagA MERICAN	TypéARGO	Former	
Fixed Ballast 206 T			Name	12.5
D.W.T. 10,521c Gross7176	Ne# 380	Bale Cu499,816	Grain Cu562,827	Sp.11
D.W.T. 10,9219 Gross1410	Neccos	Bale Cutty, Cut	Grani ou, and	op.
FC 2				

MCE Hull No. 2/40 Built byBETH.FAIRFIELD SHIPYARDAtINE. BALTIMORE, MDGompleted 5-29-43 Basis to W.S.A. 5-29-43 4:00PM ENT @ Paltimore, Kd. Owned

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
	Dichmann, Wright & Pugh, Inc. Eastport SS Corp.	GAA MC/BB		5-29-43 4:00pm 5-22-47 12:01am
	SO.ATLANTIC SS LINE RES. FLEET	GAA	NEW ORLEANS BEAUMONT	CST 7-28-49 MID CST. 8-11-49 10;30AM
	Lykes Bros. SS Co Operating Reserve Fleet	GAA	Beaumont Beaumont	4-17-51 1:25PMCST 6-20-52 12:15PMCST
	Artifical Fish Reef Program/State of Texas Physically Delivered	Purchas		6–20–75 6–27–75

· • • VESSEL STATUS CARD #243, 527

Name DWIGHT	L. MOODY	Flag	AMERICAN	Туре	OHIGO	Former Name		
D.W.T.10,453	c Gross	7176	Net 4380	Bale C		Grain Cu.	Sp.12	•5
MCEHull No.1526	Built b	y J. A. Jo	nes Const. Co	At Pana	#8 ma City, Fl	a Completed	7-24-43	
Basis to W.S.	.A. 7-24-4	13 5:30PM (WT © Panama	City, Fl	a.		(Owned)	
•								

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
	Lykes Bros. SS Co., June. Reserve Fleet Lykes Bros. SS Co., Inc. (Pending dely B	-	Panama City Lee Hall,Va. Lee Hall,Va.	7-24-43 5:30PM CW 5-29-46 12Mid. ED 4-1-47 2PM EST
3-28-47		MC/BB GAA <	Balt., Md. NEW ORLEANS BEAUMONT	5-6-47 12:01AM ED 1-13-50 MID. CST. 1-23550 11AM CST.
	Meere McCorwäck Lines RESERVE FIRET	GAA	Beaumont BEAUMONT	5-4-51 3:00PMCST 6-16-52 1:45PMCST
	Artifical Fish Reef Program/State of Texas Physically Delivered	Purchase	Beaumont	7/1/75 7/9/75

Off. # 243,360

VESSEL STATUS CARD

Type Cargo EC-2 Former Name EDWARD W. SCRIPPS Flag American Name D.W.T. 10,800a Gross 7,176 Net 4,380 Bale Cu.4499.573 Grain Cu. Sp.12.5

MCEHull No. 1645 Built by California S.B. Corp. # 178 Los Angeles, Cal. Completed 5-11-43 Basis to W.S.A. 5-11-43 10:30AM PWT @ Los Angeles, Cal. Owned

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
<u></u>	Alcoa S ^S Co., Inc.	GAA	Los Angeles, Cal.	5-11-43 10:30AM PWT
	Alcoa SS Co., Inc.		Mobile, Ala.	5-9-46 12Mid. CST
	Alcoa SS Co., Inc. BLIDBERG ROTHCHILD Waterman SS Corp. Reserve Fleet Isthmian SS Co. RESERVE FLEET	MC/BB GAA	NEW ORLEANS Mobile Alg Mobile Fleet	9-22-46 12Mid. CST 8-19-48 MID CST 10-22-48 12 NoonCST 10-26-48 145 PM CST 5-3-51 8:20 AMCST 6-25-52 9:45AMCST
	Artifical Fish Reef Program/State of Texas Physically Delivery	Purchas	e Beaumont	5/8/75 6/5/75

VESSEL STATUS CARD Off. #244,100 NameGEORGE DEWEY Flag AMERICAN Type CARGO ... Former 12.5 Name Bale Cu. 499573 Grain Cu. 562608. Sp. 11 D.W.T. 10325c Gross 7225 Net 4397 Eet MCEHull No. 1202 Built byst. JOHN'S RIVER SB ACO. INC. FLA. Completed 8-27-43 Basis to W.S.A. 8-27-43 2'50PM EWT @ Jacksonville, Fla. Owned

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
Allocabou				
	American Export Lines, Inc.	GAA	ackson fill Fla.	e8-27-43 2°50FM
	AMer. Export Lines, Inc.	Int.BB	New York,NY	6-20-46 12:01AM EDT
	American Export Lines Inc	мс/вв	New York	11-6-46 12:01am EST
	AMER EXPORT LINES INC. BOLAND & CORNELIUS	GAA	ne le	12-7-47
	ROLAND & CORNELIUS	GAA	1 II	12-12-47 12:01 AM EST
	Reserve Fleet	1	Hudson River	1-6-48 3.30 PM
	West Coast Trans-Oceanic SS Line RESERVE FLEET	GAA -	Hudson River BEAUMONT	9-26-51 12:15PMEDST 5-31-52 10:05AMCST
	Artifical Fish Reef Program/State of Texas (Physically Delivered)	Purchase	1	8/6/75 8/12/75

Off. #245,915

VESSEL STATUS CARD

Name GEORGE L. FARLI	SY Flag American	Type Cargo	Former	
Name GEORGE L. FARL 3 754 104919 D.W.T. 10,8000 Gross	C FB 2767		Name	12.5
D.W.T.10,8000 Gross	7176 Net 4380	Bale Cu. 499,573	Grain Cu.	Sp.
EC2-S-C1	Ce			
Hull No.3037 Built	by New England SB Corp.	AtSo.Portland, Me.	Completed 7-20-44	

Basis to W.S.A. 7-20-44 2:00PM ENT @ So. Portland, Me .- Owned

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
	Boland & Cornelius Co., Inc.	GAA	So.Portland, Me.	7-20-44 2:00PM
	Boland & Cornelius	Int.BB		8-17-46 12:01AM EDT
	Boland & Cornelius	MC/EE	Galveston,Te	.12-14-46 12:01 All CST
	Blidberg Rothchild Co RES. FLEET Grace Line INC Husbanding	BB GAA	WILM. N.C.	1-4-49 12 Mid ES 11-14-49 2PM EST, 3-31-51 9:00AMEST
	Grace Line Inc Operating RESERVE FLEET Artifical Fish Reef Program/State of	GAA Purchase	BEAUMONT	5-4-51 12M1dEDST 6-21-52 10+30AMCSI 6/6/75
	Texas Physically Delivered			6/20/75

#242,020	#242,020 <u>VESSEL STATUS CARD</u>		
Name GEORGE VANCOUVER	Flag AMERICAN	Type CARGO	Former 12.5
D.W.T.10844c Gross 7176	Net 4374	Bale Cu.499573	Grain Cu. 562608 Sp. 11
ME Hull Not 353 Built by KA	iser co. INC.#/	At PORTLAND	Completed7-22-42
Basis to W.S.A. 7-22-42	10:00RM PWT @ F	ortland. Owned	

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
	American President Lines	GAA	Portland	7-22- 42 10:00PM
	Oliver J. Olson & Co.		San Francisco	8-29-44 1:00PM FWT
	USMC Reserve Fleet		Cal. Hudson ^R iver, NY	4-30-46 12Mid. EDT
	Eastern Gas & Fuel Assoc. (Pending dely - BB)	GAA	New York	3-17-47 7AM EST
	Eastern Gas & Fuel Assoc.	MC/BB	New York	4-11-47 12:01AM EST
	DICH. WRIGHT & PUGH RES FLEET	GAA	WILM N.C.	12-11-47 4PMEST 1-5-48 11:15AM EST
	General SS Corp. RESERVE FLEET	GAA -		7-21-51 1:00PMEST 6-12-52 12:05PMCST

Off. #242,673	3
----------------------	---

VESSEL STATUS CARD

Name JIM BRIDGER	Flag AMERICAN 4370	Type Cargo	Former Name	1.4
D.W.T10,844 c Gross	7180 Net -4380-	Bale Cu. 499,573	Grain Cu562, 608	Sp. 9. 5
EC2 Hull No. 610 Built b			Completed 12-25-4	
Basis to W.S.A.12-25-	-42 7AM PWT @ Portland,	Ore.	C	Wined

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
	James Griffiths & Sons, Inc. Moore McCormack Lines, Inc. Dichman Wright & Pugh Reserve Fleet Olympic SS Co.	MC/BB GAA GAA	Portland, Ore. Baltimore Md James iver	12-25-42 7AM PWT 3-8-47 Mid. PST 2-14-48 12 Mid 3-16-48 3 PM 6-15-51 11:40 PMEDS 6-16-52 11:40 PMEDS
	RESERVE FLEET Artifical Fish Reef Program/State of 1 Physically Delivered	ſexas	Beaumont	7/10/75 7/16/75

Name JOHN WCHTHINGTON Flag AMERICAN Type S. TANKER Former Name	-
D.W.T.12,475 Grcss 3366 Net 5155 Bale C1. Grain Cu.	Sp 10.8
Hull No. 61 Built by 6.M. Stendifer Gast. Corst Vancouver Completed Dec.	1920
Basis to H.S.I. 4/22/42 7:45 PM @ St. George Bermuda from Standard Oll of NJ	RTC
7/21/43 12 Neon CWT 3 Jalvesten, Tex. Jedel. to " " " " fr 7/21/43 12 Neon CWT 3 Jalveston, Tex. from Standard Oil of NJ	rom RTC R Purch.
Date Form of Port of Date :	and Time
Standerd 011 Co. of NJ SCA St. George, 4/22/4 Bermuda 7:45 Pl	
Danaged in corvoy 5,23/43 General Empert Iron & Meta te. (for scrapping) Purch. Pert Arganses, 3/22/4 Tex. 5:00 P	

Off. #243,991	VESSEL	STATUS CARD	
Name JOSHUA THOMAS	Flag AMERICAN	Type CARGO EC 2 Former Name	
	7176 Net 4380	Bale Cu. 499.573 Grain	Cu. Sp.12.5
Hull No 1760 Built	by BETH.FAIRFIELD SY,	INCAT BALTIMORE, MD. Compl	eted 8-13-43
Basis to W.S.A. 8-13	-43 4:00PM EWT @ Balt	imore, Md. Owned	2

Date Allocated	Operator	Form of Agree.	Port of Delivery	Date and Time Delivered
	American Export Lines, Inc.	GAA	Baltimore, Md.	8-13-43 4:00PM
	Coastwise (PFE) Line	NC/BB	Portland ^O re	1-4-47 12M. PST
	WATERMAN SS CORP. RES. FLEET	GAA	MOBILE n	12-21-49 MID. CST. 12-27 #49 NOON CST.
	States Marine - Operating	GAA	Mobile	4-17-51 12:10PMCST
	Reserve Fleet		Beaumont	6-23-52 10:35AMCST
	Artifical Fish Reef Program/State of Texas	Purchas	e Beaumont	5/29/75
	Physically Delivery			6/5/75
				-

off. #243,078		VESSEL	STATUS CI	<u>IRD</u>		
Name RACHEL JACKSON	Flag	AMERICAN	Туре	CARGO	Former Name	
F.B. 278 D.W.T. 10572 Cross	7176	Net 4380	Bale	Cu.499573	Grain Cu.	562608 Sp.12.5
Hull No.721 Built by Basis to W.S.A. 3-19-1	y CALIFOR	NIA S. B. PWT G Los	CORPATIOA	ANGELES, CI	L. Completed	3-19-43
Basis to W.S.A. 2-12-	ישעידיטיי עד					

	Date Allocated	Operator '	Form of Agree.	Port of Delivery	Date and Time Delivered
- X	Allocator	Black Diamond SS Co. Reserve Fleet		Cal .	3-19-43 10:45AM 8-6-46 12Mid. EDT
		New York & Cuba Mail SS Co. RESERVE FLEET	GAA -: n:	James River BEAUMONT	10-26-51 11:00AMEST 6-13-52 6:05PMCST
		Artifi al Fish Reef Program/State of Texas	Purchas	e Beaumont,	7/29/75 1:40Pm CDT

_

Off. #244,007

VESSEL STATUS CARD

Name WILLIAM H. ALLEN F.B. 273 T.	Flag AMERICAN	Type CARGO EC2-S-C1	Former Name	12.5
D.W.T. 19575 Gross 7176 10,469c MCE Hull No. 1714 Built by 1		Bale Cu. 499573 CORP. RICHMOND. CAL	,	562608 Sp. 11 8-3-43
Basis to W.S.A. 8-3-43 3*0	DOPM PWT @ Richmon	nd, Cal. Uwned		· · · · · · · · · · · · · · · · · · ·

Date Allocated	Uperator .	Form of Agree.	Port of Delivery	Date and Time Delivered
	Isthmian S.S. Co. Isthmian SS Co. Isthmian SS Co. MISSISSIPPI SEP'G CO. RES. DL. T Olympic SS Co Operating	GAA Int.BB MC/BB GAA	Galveston,Tex Mobile, Ala. NEW ORLEANS	8-3-43 3:00PM .7-29-46 12Mid.CST 12-13-46 12:01AM CST 1-17-50 MID. CST. 1-28-50 3:30PM GST 4-26-51 9:30 AMCS
	RESERVE FIRET Program Artifical Fish Reef/State of Texas Physically Delivered	- Purchas	Beaumont	6-14-52 7:15PMCST 7/16/75 7/22/75

APPENDIX 2. **INSTRUCTIONS TO MASTERS**

NAVY DEPARTMENT

WASHINGTON

March 30, 1942

CONFIDENTIAL

Gross Tons.

Op-23L-JH (SC) S76-3

Serial 097923

From:

The Secretary of the Navy.

To :

Master ¥.S. GEORGE DEVEY S.S.

SUBJECT:

Instructions for Scuttling Merchant Ships.

1. It is the policy of the United States Government that no U. S. Flag merchant ship be permitted to fall into the hands of the enemy.

2. The ship shall be defended by her armament, by maneuver, and by every available means as long as possible. When, in the judgment of the Master, capture is inevitable, he shall scuttle the ship. Provision should be made to open sea valves, and to flood holds and compartments adjacent to machinery spaces, start numerous fires and employ any additional measures available to insure certain scuttling of the vessel.

3. In case the Master is relieved of command of his ship, he shall transfer this letter to his successor, and obtain a receipt for it.

/s/ FRANK KNOX

Received 3 September 1943 Date

7225

Port Director

Jacksonville, Florida Port

Edwin C. Jamushi Master

Copy to: VCNO

APPENDIX 3. **INSTRUCTIONS TO ARMED GUARDS**

ICTED

VERAL INSTRUCTIONS FOR COMMANDING OFFICERS OF NAVAL ARMED GUARDS ON MERCHANT SHIPS 1. General. 2. Relations with Communications er I. THE ARIAED GUARD COMMANDER. Relations with Crew and Passengers.
 Relations with the Master of the Vessel. er II. PRIOR TO SAILING. 1. General Arrangements. 2. Equipment. 3. Mutch, Cuarter, and Station Bills. (see amplification) 4. Security in Port. ter III. AFTER SAILING. 1. At sea. 2. Lookouts. 3. Action. 4. Air Attacks. iter IV. ARRIVAL IN PORT. 1. Foreign Port. 2. United States Port. 3. Reports. bter V. GENERAL INFORMATION. 1. Pay and Subsistence. 2. Advancement in R_ting. 3. Mail and Gensorship Regulations. Lair and conserving Regulations.
 Communications.
 Care of the Wounded.
 Notes on Abandoning Ship.
 Armed Cuard Training Facilities.
 Basis for Assignment of Armed Guards to Ships.
 Miscellaneous Information. TS: General Instructions for Commanding Officers of Naval Armed Guards on Merchant Ships. Wartime Instructions for United States Merchant Ships. . . - 60 -

REVISED

RESTRICTED

- I. ORGANIZING THE SHIP. Before sailing, plan your organization, as far as practicable, covering all stations of your crew under the various conditions.
 - A. A Watch, Quarter, and Station Bill shall be drawn up for the vessel and published, showing location of stations and allocation of naval personnel on watch duty on a 24-hour basis. The Watch Bill will in all cases include the following Conditions of Readiness which have been established for the armed Guard service.
 - 1. CONDITION I GENERAL QUARTERS.
 - Show disposition of naval personnel at the ship's armament, with all hands at battle stations, including the merchant crew.

CONDITION II.

In areas where submarine, surface, or air attack is imminent and contact with the enemy may be expected at any moment, the entire Armed Guard will stand watch and watch. Each of the 2 watches under this Condition may be divided into two sections. This will provide sufficient men for each section to stand 2 hours! lockout duty each 4-hour watch. The standby section will be stationed at the guns ready for instant action. If conditions warrant, the standby section shall also be stationed on lookout duty.

🖕 tater data 🛛 📖

1.11.2.2.2

REVISED

CONDITION III.

During normal steaming at sea, the Armed Guard will be divided into not to exceed 3 watches. The Armed Guard lookouts shall stand their watches at the guns at all times. When anchored in an unguarded anchorage or roadstead, Condition 3 shall be maintained.

2. Show to what extent the merchant crew are used in supply-... ing ammunition and manning the ship's armament under each of the above Conditions. Consult the Easter of the ship concerning details of assigning merchant crew members to complete your gun crews and ammunition parties.

3. GENERAL ALARM SIGNALS.

Post signal to be sounded on ship's general alarm system for each type of attack. When the general alarm is sounded, all hands, including the merchant crew, will report to General Quarter's battle stations. The following signals should be made standard on all armed merchant ships:

Submarine sighted, or attack from starboard: One long and one short ring.

Submarine sighted, or attack from port: One long and two short rings.

Air attack: One short and one long ring.

The above signals do not conflict with the fire and emergency or abandon ship, or boat lowering signals established by the Safety of Life at Sea Convention of 1929. It is essential that the above system of signals be adopted on all armed merchant ships to prevent confusion when members of the Armed Guard or merchant seamen change ships.

The code of signals should be displayed at all operating and bell stations for the information of personnel. The Armed Guard and ship's lookouts should be directed to ring only the authorized submarine or aircraft attack or warning signals. All other signals should be sounded under the authority of the ship's officers.

It is essential that the entire ship's company (Armed Guard and merchant crew) be called to their action stations without delay when a torpedo wake, periscope, submarine or unidentified surface or aircraft is sighted. The general alarm bells should be sounded for this purpose in order that personnel may be aroused from their sleep in the shortest possible time and also that action stations may be fully manned without delay.

4. ABANDONING SHIP.

Confer with the Master regarding assignment of mon to life boats and auxiliary stations in life rafts.

5. Cleaning stations for battery and Armed Guard quarters.

B. U. S. ARIAY TRANSPORTS.

It will be noted in paragraph 1203 of General Instructions for Commanding Officers of Naval Armed Guards on Merchant Ships, 1943, Third Edition that, in cooperation with the Transport Commander, military personnel embarked for transportation may be utilized to assist the Armed Guard Unit.

- 61a -

REVISED

It must be remembered, however, that in nearly all cases, troops are disembarked at their destination, and are not available for watch standing on the homeward voyage. Therefore, it will be necessary for the armed Guard Commander abcard a USAT to have two Watch Quarter and Station Bills; one for the outbound voyage when troops are aboard, and the other for the homeward voyage when troops are not abcard. Both Match Bills will be made up for the Armed Guard crew as indicated in (A) above.

1. OUTBOULD.

Include battle and extra lookout stations to be manned by the troops aboard under Conditions I, II, and III. Due caution should be exercised so as not to assign military personnel afflicted with so-called "night blindness" to lookout duty. On the outbound voyage while the troops are on board the merchant crew should be assigned by the Master to man their abandon ship and boat lowering stations during Condition I. The merchant crew should be drilled at gun and ammunition detail stations during the outbound voyage, in preparation for the homeward voyage or passages when no troops are on board.

2. HOMELARD BOUND.

Sufficient of the merchant crew should be assigned to gun stations to complete all gun crews and pass ammunition as outlined in (A) above."

C: ADDITIONAL.

1. As nearly as practicable, assign quarters based on proximity to Condition I station.

2. Confer with the Master regarding extension of shipts. regular Fire and Emergency Station Bill to include the Armed Guard. In the event of fire or other emergency, such as collision, the Armed Guard's chief responsibility lies with aspects of the ship's armament. Magazine and flood valve keys must be readily available and members of the Armed Guard shall be stationed at magazine flood valves and sprinkler systems. Other members of the Armed Guard will stand by ready service boxes ready to jettison ammunition, if necessary, while others must be so stationed that they will be able to protect the Armed Guard guarters. The ship!s regular Abandon Ship Bill shall be extended in like manner.

PEVISE

RICTED

TRAINING AND EDUCATIONAL PROGRAM.

1. TRAINING.

Drills in the following duties to be performed aboard ship. a. General Guarters.

- b. Pointing, training, and sightsetting.
- c. Casualty.
- d. Talker drills on battle 'phones.
- e. AA ring sight tracking.
- f. Aircraft recognition.
- g. Fire and abandon ship.
- h. First aid.
- i. Instruction in the use of tools on ordnance equipment.
- j. Instruction of lookouts in standing an alert watch.
- 2. EDUCATIONAL.
- 1. Qualifying SEAlc as such through use of Navy Training Courses.
 - 2. Advancement of SEA lc to Petty Officer rating through use of Navy Training Courses.

REVISED

ESTRICTED

AND STATION BILL
WATCH, QUARTER, AND STATION BILL
- STANDARD MARITIME CONVISSION LIBERTY SHIP.
- 4" 50 Cal 3" 50 Cal. DP - 8 @ 20 124.
- OFFICER - 4 PETTY OFFICERS - 20 SEAMEN.
家家餐餐餐餐餐店店店。 安安餐店店 网络大学家
- Shows the location of armament with the disposition of lookouts and standbys when sailing in Condition II, and the assigned arcs of vision for which lookouts are responsible. Entire armament can be fired by members of the watch section.
- Shows the disposition of lookouts and standbys in Condition III, and the assigned arcs of vision for which each lookout is responsible. Both of the broadside guns and 4 of the 20 mm can be fired by members of the Watch section.
 Shows the following for each member of the Armed Guard: (1) Condition I Station (2) Condition II Section Lookout Station (3) Condition III Section Lookout Station (3) Condition III Section Lookout Station (4) Cleaning Station. (5) Fire Station. (6) Abandon Ship Station.
- Shows the Merchant Crew Battle Station Assignments.

•

	COUDITI	ON II WATO	CH		
	SECTION	· ·		••• • • • • • • •	
	P. O	1 - P	•	· • •	2
	FIRST TWO H	HOURS OF T	HE WATCH		
LOOKOUT				STANDBY	
20M #1		3" 50			- V
20M #2		3" 50		·	
CONTROL 20M, #3		2011 1 /5			
20m #4		2011 7,-6	. · · ·		1 A.S.
		4" 50			
20m #8		4" 50			
	SECOND TWO H		D IA TOU		
20M #1					
20M #1 20M #2		3" 50			
CONTROL					
20M #3		2011 775			
20m #4		20M 1 ⊧6			· =
20M #7		4" 50			<u>.</u>
20M #8	<u></u>	4 " 50			
ייס את דיס	TED IN GUNC CREW Q	UA RTERS TO	GETHER WITH	A SCHEDULE	
	IG THE WATCH TO WH				

STRICTED		
	CONDITION III WATCH	
	SECTION	
	P.O.	
•	FIRST TWO HOURS OF THE WATCH	
T OOVO	STANDBY	
LOOKC	3" 50	
50,		
NTROL M #3	2014 7-5	
ж # 4	20M # ⁸	
50	4" 50	
	SECOND TWO HOURS OF THE WATCH	
50	3" 50	
ONTROL	2016 #5	
0M π ³	20M #5	
om 774	20M 1-8	
5 0	4" 50	
•	BE POSTED IN GUN CREW QUARTURS TOGETHUR WITH A SCHEDULE	
TO	BE POSTED IN GUN CRAM CONTRINUE TO THE ASSIGNED.	
	SHOWING THE WATCH TO WHICH FACH SECTION IS ASSIGNED.	
•		
•		4.a
1		
* *		
	₩ 64 ₩	
	·	

NALO			. LIBERTY	CONDITION II	
NAME	RATE	CONDITION I	SECTION	LOOKOUT STATION	STANDBY ST.
	S1/c	POINT. 3"50	1	20M#1	3"50
	Sl/c	TRAIN. 3"50	2	20M#1	3#50
	GM3/c	SIGHTSETTER 3"50	11	20M#2	3"50
· · · · · · · · · · · · · · · · · · ·	Sl/c	1ST. LOADER 3"50	2	20M#2	3"50
	Sl/c	20M#1	1	2014/1	3"50
	S1/c	20M#2	1	20M#2	3"50
	Sl/c	2014/1	2	20141	3"50
····	Sl/c	2014/2	2	2014/2	3"50
	S1/c	20143	· 1	CONTROL 20M#3	20145
	Sl/c	2014#3	2	20 <u>M#4</u>	20!供6
	GM3/c	20144	1	CONTROL 20M#3	20!得6
		2014#4	2	2014/4	2014#6
	Sl/c	2014#5	1	20144	20145
	COX.	2011#5	2	CONTROL 20M#3	20145
	Sl/c	20M#6	1	2014#4	201446
	S1/c	2014#6	. 2	CONTROL 20M#3	20145
	Sl/c	20147	1	20M#7	4#50
·	Sl/c	1ST LOADER 4"50	2	2014#7	4"50
	Sl/c	2014#8	1	2014#8	4"50
	Sl/c	H.S2ND LOAD.4"50	2	2014/8	4"50
	Sl/c	POINT. 4"50	1	2014#7	41150
	Sl/c	TRAIN. 4"50	1	2014#8	4"50
	S1/c	SIGHTSETTER 4"50	2	2014#7	4"50
	COX.	PLUGMAN 4"50	2	2014/8	4"50

ICTED		QUARTER, AND STATI S. S. LIBERTY SHIP	ON BILL			
<u>CONDITION III</u> N LOOKOUT STATION	STANDBY STATION	CLEANING STATICN	FIRE STATION		ABANDON SHIP STATION	
3"50	3"50	3#50	<u>3" READY</u>	BOX		:
3"50	3"50	3"50	3" READY	BOX		
3"50	3"50	IN CHARGE 3"50	FOR D MAG	GAZINE	•	
3"50	3"50	3"50	3" READY	BOX		
3"50	3"50	20141	#1 READY	BOX	• • • • •	
3"50 CONTROL	3"50	20M#2	#2 READY	BOX		
20M#3 CONTROL	20M#5	2014/1	#1 READY	BOX		.
20M#3 CONTROL	20M#5	2014#2	#2 READY	BOX	· · · · · · · · · · · · · · · · · · ·	
20M#3 CONTROL	2014#5	2014/3	#3 READY	ВОХ		
20M#3 CONTROL	20М#5	2014//3 (IN CHARGE	#3 READY	BOX	•,•,••,••	
20M#3 CONTROL	20M#5	20#4 (#2,4,6,8,		EADY BOX	<u> </u>	
20M#3	2014#5	2014/4	#4 READY	BOX	·····	
20M#/4	2014/8	2014/5 (IN CHARGE	#5 READY	BOX		
2014#4	2014#8	20#5 (#1,3,5,7,		EADY BOX	<u>(</u>	
201.11/4	2014/8	201476	#6 READY	BOX	·	
· 201444	2014/8	2014/6	#6 READY	BOX		
4150	4"50	2014/7	#7 READY	BOX		
201444	2014//8	201研7	7 READY	BOX		
2016年4	2014#8	2014/8	#8 READY	BOX		
1,1150	4"50	2014#8	#8 READY	BOX		···
41150	4"50	4"50	4" READY	BOX		ہ 7
4"50	4"50	4"50	4" READY	BOX		
4,150	4:150	4150	4" READY	BOX		
4"50	4"50	IN CHARGE 4"50	AFT MAGA	ZINE		
		- 66 -				

RESTRICTED

			and a start of the	
· •	MERCHANT CR	EW BATTLE S	STATION ASSIGNMENTS	
NAME	TITLE	• •	BATTLE STATION	
·			LOADER 3" 50	••••
• • • • • • • • • • • • • • • • • • • •		·····	LOADER 2011 #1	
· ·	·	· · · · · · ·	LOADER 20MM #2	• •• •• ••
· · · · ·	•. • •		LOADER 2011 773	· · · ·
·		· · ·	LOADER 20MM #4	
· · · · · · · · · · · · · · · · · · ·	•		LOADER 20M1 #5	
and a second		· · .	LOADER 20MM 7/6	::=
· · · ·		•	LOADER 20MM #7	
• • • •	•		LOADER 201M 7-8	
			20}₫€ ∯7	
			20111 // 8	
	·		AMEUNITION FOR'D PAGE	a a cara a c
	•		ANTUNITION FOR'D MAGA	
		· · ·	AMMUNITION FOR'D PAGA	
······	n in the second se	·	AFTUNITION AFT LAGE 21	
· · · · · · · · · · · · · · · · · · ·	••••••	······································	AMIUNITION AFT MAGAZI	
······	·····		AMMUNITION AFT MACADE	
	· • •			
HAS				
	· · · · · · · · · · · · · · · · · · ·	• • • • • •	Lieut. (JG), USMR.	
		• • • • •		
	* 1640 mg (· · · · · ·	•	

Liberty Ship Wrecks Page 125 ESTRICTED

ならうてあるます

Constant and

GENERAL INSTRUCTIONS AND GENERAL ORDERS

ч. -

- 68 -

مقيادة الماليان

t is essential that Instructions and Orders of the Armed Guard. fficer to members of his Unit be published and posted. The attached opy of General Orders will serve as assistance in the instruction of ew officers so that they may familiarize themselves with the type of rders and instructions. (SAMPLE COPY OF GENERAL ORDERS TO BE POSTED IN A CONSPICUOUS PLACE ABOARD)

GENERAL ORDERS S.S. LIBERTY SHIP

CONDUCT IN GENERAL

- A. Attention is directed to "ARTICLES FOR THE GOVERNMENT OF THE UNITED STATES NAVY" which have been posted.
- B. You are under the constant observation of the Merchant Officer and the Crew of this Vessel. Never commit any act which will bring discredit to the Navy and the uniform that you are weating

PORT WATCHES

- A. Port Natches are stood by the Armed Guard to prevent sabotage armament and other Navy Department equipment.
- B. Uniform for the watch will always be undress blues, leggings, watch caps, or white hats, and sidearms. (Any change in the uniform will be posted with watch)
- C. All members of the watch section will remain aboard at all time
- D. The watch will be stood in a strictly military manner. Smoking or eating on watch will not be allowed.
- E. In case of fire:
 - 1. Ring the GENERAL ALARM
 - 2. Notify the bridge and engine room
 - 3. Prepare to throw ammunition over the side
 - 4. If necessary flood the magazine
- F. Each sentry will know and understand the particular duties of h post. He will know the location of the magazine flood value an have the key for same in his possession.
- G. The Petty Officer of the watch will have keys to all magazines in his possession.
- H. Under no circumstances will a sentry leave his post without being properly relieved.
- I. Members of the Armed Guard will stand the watch to which they a assigned.
- J. If you relieve the watch for any purpose whatsoever you must be in proper uniform.
- K. You will salute all commissioned officers of the Navy, army, an Marine Corps.

SEA WATCHES

A. It is of little use to arm a ship unless a bright lookout is kept.

- 69 -

Liberty Ship Wrecks Page 127

RES

ESTRICTED

The safety of the vessel depends fully as much upon a proper lookout as it does upon the protection afforded by the guns. Each man has a heavy responsibility,

- B. Lookouts will be alert at all times and will be held responsible and accountable for a definite assigned arc. NO CONVERS-ATION WILL BE PERMITTED.
- C. Lookouts will not be allowed to smoke or eat while on station.
- D. Lookouts and standbys under no circumstances will leave their assigned stations without the approval of the Petty Officer of the watch.
- E. All hands who man battle 'phones will restrict theri use to official business. NO CONVERSATION, WHISTLING, OR SINGING WILL BE ALLOWED ON THIS COLLUNICATION SYSTEM.
- F. At GENERAL QUARTERS all hands will stand an alert watch. (Dawn and Dusk)
- G. Upon sighting anything suspicious the General Alarm will be rung, standbys called to their battle stations, and Control notified. Control will immediately notify the bridge.
- H. Men reporting anything sighted to Control, the bearing in degrees, and approximate distance should be given.
- I. At night the relief watch will be called 30 minutes before the watch is to be relieved. Each member of the relieving watch will be at his assigned station 15 minutes before the hour of change so that he may accustom his eyes to the darkness.
- J. Life jackets will be worn by all members of the watch and by all hands at General Cuarters.
- K. Men you are off duty it will be necessary for you to stay as close to your quarters as possible. You cannot go to your battle station quickly if you are in some part of the ship completely removed from it.

QUIPMENT

À.	All hands will see to it that tools on ordnance equipment.	improper use is not made of any If you do not know how to use the
	tools which are issued to you	ask for instruction.

- B. All tools, etc., issued to you will be returned to the Ordnance Locker as soon as you are finished using it.
- C. No one is permitted to sell, remove from the vessel, or otherwise misappropriate any article belonging to the Navy Department. To do so is a court-martial offense.

• 70 •

RESTRICTED

	QUAR	TERS	
	•	Ά.	Members of the Armed Guard shall keep their quarters clean and orderly at all times. An inspection of quarters may be made at any time.
		в.	Only U.S.N. personnel are permitted in your quarters.
		C a -	Ship's crew quarters are off limits at all times.
	CLOT	HING	
		ĥ.	Men shall keep themselves neat, clean, and in proper uniform, will not wear or have in your possession any non- regulation clothing.
		в:	You have been issued certain articles of clothing which are the property of the Navy Department and for which you are held acco able. Selling or misappropriation of this equipment is a court
	4 x 10 ¥	• • •	martial offense.
	MAIL		
•			all outgoing mail will be placed unsealed on the desk of the Use Commanding Officer to be censored.
		в.	All incoming private mail must be addressed as follows: NAME, c/o ARLED GUARD CENTER, ADDRESS. No other address may be used.
		C.	No one is permitted to accept mail from anyone else in either the U.S.A. or any foreign port for purposes of evading censor- ship regulations.
	LIQU	DR	
	8	Α.	No one will drink wines, beers, or liquor aboard the ship or have same in their possession.
	GAMBI	,ING	
		Α.	Gambling by members of the Armed Guard is not permitted.
	GIFTS		
	51 \$ 2.1 ⁴⁴ 1	Α.	Members of the Armed Guard shall not at any time accept grat- uities in any form if offered by the Merchant Crew.
	.: -1 ▲ [•]	•	Lieut. (jg) USNR. Commanding Officer, Armed Guar
	1	Note	The preceding section on general instructions on Armed Guard duties should be duplicated and complete copies furnished the the officers in training.

APPENDIX 4. LISTS OF SAMPLE CREW AND EQUIPMENT ISSUED

OVVER Version of the second se		Supplement #1	
SERIAL PD 148508	PORT DIF	RECTOR'S REPORT ARMING ME	ERCHANT VESSELS
SERIAL PD 148508	CONCHDENTIAL		MS
OWNER: Interview (interview, isplipping, Administration) OPERATOR or AGENT Isthming SS REGISTRY: Juitad.StatesClass (Pass., Cargo or Tank Ship) Cargo	SERIAL PD .148508	NAME OF SHIP:	SS William H. Allen
BEGISTRY: Julisd.States		ag Administration	OPERATOR or AGENT Isthmian SS Co
AsaTUDNEBARY: Salling Date: .Aug. 17. 1943 From: San Francisco, Calif. ToRe Nalishen dia Via: SHIP'S CREW Commissioned Nature Via: SHIP'S CREW Commissioned Nature Via: SHIP'S CREW Commissioned Nature Via: Nature Vi			and the second
Walking of the state of th	101. A 1		
SHIP'S CREW Commissioned Rank MATOR MATOR Mark Name OFFICIENS AMATOR Name Name OFFICIENS Name Name Name Name Name <td< td=""><td>Acad ITINERARY: Sailing</td><td>Date:Aug171943 From:</td><td>San Francisco, Calif. To Roon</td></td<>	Acad ITINERARY: Sailing	Date:Aug171943 From:	San Francisco, Calif. To Roon
SHIP'S CREW Commissioned Rank MATOR MATOR Mark Name OFFICIENS AMATOR Name Name OFFICIENS Name Name Name Name Name <td< td=""><td></td><td>and the second sec</td><td>Via:</td></td<>		and the second sec	Via:
MANUER Hance OFF ODRSIGNAL ANALY Name Seama Onliers Seama Onliers Seama Onliers Seama Number on Board Julio Mates Namath			Commissioned
OFFICIENTS: States Contraction Contraction Contrestreament Contraction	A MARCHAR & Calling Story	G.	Rank
GTFORTSTERS Charling Diel Ordering Enclosering Department Enclosering Department Diel Ordering Charling Charling Station Charling Charling Viewer Station Charling Deck Department Englisering Department Steward's Department First Mate Deck Engineer 2 2 Junior Mates Lie, Jr., Engrs. Steward 2 Carpenters L Deck Engineer 2 2 JaryPursers Y Refrig Engrs. Yeoman 3 Dector's Asst <td>A REAL PROPERTY AND A REAL PROPERTY AND</td> <td></td> <td>- MA - 44 - MA</td>	A REAL PROPERTY AND		- MA - 44 - MA
Construction Construction Sector Charactering Department Charactering Department Charactering Charactering Charactering	OFFICERSIMAN MENOR.		
Littlevention Littlevention Littlevention Littlevention Characterian Characterian Characterian Characterian Characterian Characterian Characterian Characterian Characterian 1 Characterian Characterian Characterian Characterian 1 Characterian Characterian Characterian 1 Characterian Characterian Characterian 1 Characterian Characterian Characterian Characterian 2 Characterian Characterian Characterian 2 Characterian Characterian Characterian 2 Characterian Characterian Characterian 2 Characterian Characterian Ch			
Deck Department Engineering Department Starting all and a	incolaradopynametonly		
14.1 Diffuer 1 2nd Code 1 2nd Code 3 1 2nd Code 2	Lisconinistioned)	******	
14.1 Diffuer 1 2nd Code 1 2nd Code 3 1 2nd Code 2		Carline Astron	and states and states
14.1 Diffuer 1 2nd Code 1 2nd Code 3 1 2nd Code 2		Engineering Department	SIGNAL STATE DAMAGEMENT
Status 2nd Contrast 1 Brd Cook 33 Status Differen 1 Brd Cook 33 Status Differen 3 Utilitymen 3 Status Differen 2 3 3 Total CREW INCLUDING MASTER 42 42 42 FASSENCERS Nümber on Board 28 20 20 Deck Department Deck Engineer 1 2nd Steward 3 Junior Mates Lic, Jr. Engrs. 3rd Steward 40 5 Gais 1 Refrig Engrs. Yeoman 40 6 <t< td=""><td></td><td>One solid stream and a second</td><td> Chillioward</td></t<>		One solid stream and a second	Chillioward
Status 2nd Contrast 1 Brd Cook 33 Status Differen 1 Brd Cook 33 Status Differen 3 Utilitymen 3 Status Differen 2 3 3 Total CREW INCLUDING MASTER 42 42 42 FASSENCERS Nümber on Board 28 20 20 Deck Department Deck Engineer 1 2nd Steward 3 Junior Mates Lic, Jr. Engrs. 3rd Steward 40 5 Gais 1 Refrig Engrs. Yeoman 40 6 <t< td=""><td>an Partit Part Contains and the second</td><td>1</td><td>Ch. Cooler State</td></t<>	an Partit Part Contains and the second	1	Ch. Cooler State
Semula blog Firemen 3 Utilitymen 4 Semula blog Firemen 3 Utilitymen 4 Semula blog Ollers 3 Utilitymen 4 Semula blog Wipers 3 4 4 Semula blog Wipers 3 4 4 Semula blog Wipers 3 4 4 Semula blog Wipers 2 4 4 Semula blog TOTAL CREW INCLUDING MASTER 42 4 PASSENGERS Number on Board 28 4 4 EXPANDED CREW LIST Expendence 1 2nd Steward 1 Junior Mates Lic, Jr. Engrs. Srd Steward 1 1 Carpenters 1 Electricians Mate Cabin Chief Steward 1 Cadets 1 Maintenance Men Head Waiters 1 Jurpursers 1 Refrig Engrs. Yeonan 1 Doctor's Asst. Unlic, Jr. Engrs. Storekeepers Janitor Turnsunterior Cadets 1 Porters <td>and the second states with specific</td> <td></td> <td>2nd Cook</td>	and the second states with specific		2nd Cook
Semula blog Firemen 3 Utilitymen 4 Semula blog Firemen 3 Utilitymen 4 Semula blog Ollers 3 Utilitymen 4 Semula blog Wipers 3 4 4 Semula blog Wipers 3 4 4 Semula blog Wipers 3 4 4 Semula blog Wipers 2 4 4 Semula blog TOTAL CREW INCLUDING MASTER 42 4 PASSENGERS Number on Board 28 4 4 EXPANDED CREW LIST Expendence 1 2nd Steward 1 Junior Mates Lic, Jr. Engrs. Srd Steward 1 1 Carpenters 1 Electricians Mate Cabin Chief Steward 1 Cadets 1 Maintenance Men Head Waiters 1 Jurpursers 1 Refrig Engrs. Yeonan 1 Doctor's Asst. Unlic, Jr. Engrs. Storekeepers Janitor Turnsunterior Cadets 1 Porters <td>an shi tekni ka ta ta ta shi shi shi shi shi shi shi shi shi shi</td> <td>1</td> <td> Brd Cook</td>	an shi tekni ka ta ta ta shi	1	Brd Cook
Series Ord Firemen 3 Utilitymen 3 Series Ord Offers 3 Offers 3 Series Ord ToTAL CREW INCLUDING MASTER 42 42 PASSENGERS Number on Board 28 42 42 PASSENGERS Deck Engineer 1 2nd Steward's Department 54 Junior Mates Lic. Jr. Engrs. Steward 3rd Steward 42 Junior Mates 1 Deck Engineer 1 2nd Steward 42 Carpenters 1 Blectricians Mate Cabin Chief Steward 43 44 44 <t< td=""><td>Bollywainteringer Link</td><td>and the second states and the second s</td><td> Measmen</td></t<>	Bollywainteringer Link	and the second states and the second s	Measmen
Status Onder Gradie Otlers 3 Rain Operators 1 Wipers 2 TOTAL CREW INCLUDING MASTER 42 PASSEMGERS Number on Board 28 EXPANDED CREW LIST Deck Department Steward's Department First Mate Deck Engineer 1 Junior Mates Lic, Jr. Engrs. 3rd Steward Carpenters 1 Electricians Mate Cabin Chief Steward Cadets 1 Refrig Engrs. Yeoman Staff Department Plumbers Aud. of Supplies Printers 1 Refrig Engrs. Yeoman Doctor's Asst. Unile, Jr. Engrs. Storekeepers Janitor Yeoman Measmen Concessionaires Concessionaires Office is Creat Cadets 1 Porters Concessionaires Office is Creat Cadets 1 Porters Sous Chest Staff Department Storekeepers Janitor Storekeepers Storekeepers Printers Storekeepers Janitor Sous Chest Eaging Cooks Storekeepers Leading Coo	Scamon-Aple	Firemen 3	Utilitymen
Ridia Operators Wipers 2 TOTAL CREW INCLUDING MASTER 42 TOTAL CREW INCLUDING MASTER 42 PASSENGERS Number on Board 28 EXPANDED CREW LIST Expanded and the second and the s	Scamen Ord Kay 8	Oilers	- 編載 注書 131
TOTAL CREW INCLUDING MASTER 42 PASSENGERS Number on Board 28 EXPANDED CREW LIST Engineering Department Steward's Department First Mate Deck Engineer 1 2nd Steward Junior Mates Lic. Jr. Engrs. 3rd Steward 3rd Steward Carpenters Lic. Jr. Engrs. 3rd Steward 3rd Steward Cadets A Maintenance Men Head Waiters Staff Department Plumbers Aud. of Supplies Doctor's Asst. Unile. Jr. Engrs. Storekeepers Printers Veoman Measmen Contraunication Grave Cadets Porters Office in Grave Cadets 1 Porters Office in Grave Cadets 1 Porters Office in Grave Codets 1 Lic. Steward Storekeepers Janitor Storekeepers 3 Printers Storekeepers Janitor Concessionaires Office in Grave Cadets 1 Porters Concessionaires Office in Grave Sous Chef Leading Cooks As	Radio Operatore 1		
FASSENGERS Number on Board 28 ExpANDED CREW LIST Expanded for the second s		TOTAL CREW INCLUDIN	IG MASTER
Deck Department Expanded performant Steward's Department First Mate Deck Engineer 1 2nd Steward Junior Mates Lic. Jr. Engrs. 3rd Steward Carpenters 1 Electricians Mate Cabin Chief Steward Cadets 1 Maintenance Men Head Waiters Staff Department Plumbers Aud. of Supplies Doctor's Asst. Unile. Jr. Engrs. Storkeepers Printers Vortes Storkeepers Cadets	PASSENGERS	on Doord 29	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Deck Department Engineering Department Steward's Department First Mate Deck Engineer 1 2nd Steward Junior Mates Lic, Jr. Engrs. 3rd Steward Carpenters 1 Electricians Mate Cabin Chief Steward Cadets 1 Maintenance Men Head Waiters Staff Department Plumbers Aud. of Supplies Doctor's Asst. Unilc, Jr. Engrs. Storekeepers Printers Storekeepers Janifor Cadets 1 Refrig. Engrs. Storekeepers Printers Storekeepers Janifor Concessionaires Cadets 1 Porters Concessionaires Concessionaires Chef Sous Chef Leading Cooks Straine Gradet Sous Chef Leading Cooks Asst. Cooks		UL DOALD	$\mathcal{T}_{\mathbf{r}}$
First Mate Deck Engineer 1 2nd Steward Junior Mates Lic. Jr. Engrs. 3rd Steward Carpenters 1 Electricians Mate Cabin Chief Steward Cadets 1 Maintenance Men Head Waiters Staff Department Plumbers Aud. of Supplies Joctor's Asst Unile. Jr. Engrs. Storekeepers Doctor's Asst. Unile. Jr. Engrs. Storekeepers Printers Storekeepers Janitor Cadets 1 Resemen Cunraunlostion. Grav. Cadets Porters Calets 1 Porters Concessionaires Chef Sous Chef Builsted Man Sous Chef Leading Cooks Given and the state Soulions Soullions	Deck Department		
Junior Mates Lic, Jr. Engrs. 3rd Steward Carpenters 1 Electricians Mate Cabin Chief Steward Cadets 1 Maintenance Men Head Waiters Staff Department Plumbers Aud, of Supplies Doctor's Asst. 1 Refrig. Engrs. Yeoman Doctor's Asst. Unile, Jr. Engrs. Storekeepers Frinters Yeoman Messmen Cummunication Great Cadets 1 Office is Great Concessionaires Office is Great Sous Chef Buildiged Man Sous Chef Strate Set Bakers Butchers Scullions		Deck Engineer 1	2nd Steward
Carpenters 1 Electricians Mate Cabin Chief Steward Cadets 1 Maintenance Men Head Waiters Staff Department Plumbers Aud. of Supplies 1 Refrig Engrs. Yeoman Doctor's Asst. Unile. Jr. Engrs. Storekeepers Frinters Yeoman Messmen Cummunication. Gravit Cadets Porters Officer in transform Cadets Leading Cooks Transform Sous Chef Leading Cooks Transform Bakers Butchers Butchers Scullions Scullions	Junior Mates	Lic. Jr. Engra	Srd Staward
Cadets A Maintenance Men Head Waiters Staff Department Plumbers Aud. of Supplies DeriPursers 1 Refrig Engrs. Yeoman Doctor's Asst. Unile. Jr. Engrs. Storekeepers Janitor Printers Yeoman Messmen Concessionaires Cummunication. Gravit Cadets Porters Concessionaires Officer is frames Cadets Leading Cooks Asst. Fridad Man Sous Chef Leading Cooks Fridad Man Bakers Butchers Scullions Scullions Scullions	Carpenters 1	Electriciang Mata	Cobin Chief Ctamera
Staff Department Plumbers Aud. of Supplies 1 erpPursers 1 Refrig. Engrs. Yeoman Doctor's Asst. Unile. Jr. Engrs. Storekeepers Frinters Storekeepers Janifor Contraunteetion Greet Cadets Porters Odkor is Creat Cadets Leading Cooks Frides Sous Chef Leading Cooks Frides Bakers Butchers	Cadeta 1	Meintananaa Man	Line J. W. Har
1 Refrig Engrs. Yeoman Doctor's Asst. Unile. Jr. Engrs. Storekeepers Printers Storekeepers Janitor Contraunteetion Growt Cadets Porters Odkor is Crassi Cadets Leading Cooks Builsted Man Leading Cooks Asst. Fridation Growt Bakers Butchers Strass Scullions Scullions	Second Britter in which is a	Plumbars	And of Gument
Doctor's Asst. Unile. Jr. Engrs. Storekeepers Printers Storekeepers Janitor Quantaunisation Growt Cadets Porters Odkor is Crans Cadets Concessionaires Odkor is Crans Sous Chef Builsted Man Leading Cooks Trans Asst. Cooks Builsted Man Bakers Butchers Soulions			Aud, or Supplies
Cumminication Great Cadets Porters Officer in Cranses Concessionaires Concessionaires Officer in Cranses Chef Chef Bulisted Man Sous Chef Leading Cooks STREE Bakers Bakers Butchers Scullions Scullions	lerPursers	LULTIN. CORTS.	Isoman
Cumminication Great Cadets Porters Officer in Cranses Concessionaires Concessionaires Officer in Cranses Chef Chef Bulisted Man Sous Chef Leading Cooks STREE Bakers Bakers Butchers Scullions Scullions	Doctor's Asst.	Uniic, Jr. Engrs.	Storekeepers
Cumminication Great Cadets Porters Officer in Cranses Concessionaires Concessionaires Officer in Cranses Chef Chef Bulisted Man Sous Chef Leading Cooks STREE Bakers Bakers Butchers Scullions Scullions	Printers	Storekeepers	Janitor
Concessionaires	and the second		
Offkor in frames Builting Man Greek Frank Sous Oher Leading Cooks Asst Cooks Bakers Butchers Scullions	Countratinition Courses	Cadeta1	Porters
Bullisted Man Sous Cher	Construction of the second		Concessionaires
Bulliona Sous Cher. Leading Cooks BILLES Bakers Butchers Scullions	人類時代為2014年1月2月1日時間2月10日		Chef
Leading Cooks Asst Cooks Bakers Butchers Scullions	Britinionit Main		Sous Chef
Butchers Scullons	CONTRACT A STATE		Leading Cooks
Butchers Scullons			Asst Cooks
Butchers Scullons	of Antonio and		Bakers
Scullions			Butchers
	· ·		
Waitera			Walters

---2---

Pantrymen

CONFIDENTIAL-				
		М	S	
SERIAL PD		8	S. William	H. Allen
Armed Guard Unit	Name	Rank	Branch	Classification
Ancerain Charge: BERR	X. Robert E.	Ensi	m. USNR	DV(S)
Salation C. I. C. :				
nlisted Men Mail 1 Yill	ast in the	Rating	Branch	Service No.
ANDREOZZI, Gino Jose AROZUK, Stanley Steve	ph. Sector	.f		886 37 87
WAT A CONTRACTOR AND		J anno na si na si ti si	USN	329/38/25
UISSA Albertalben	4.411		USINE	316 198/49 313 00 45
ATTRACOSCALASA WITISAN LISSI ALDER'S HDELL HINSTRONALA MURAN RUREOWS, Jack Miser				
APS, Doy Barling OOL, Janes Lawson			· · · · · · · · · · · · · · · · · · ·	882/94.41
	·····	le la carde de la	H	843761190
DWARDST Melvin Oliven	NAN TANAN ANDRE INFRI S	GM3c	USNR	604 265 761 843 62 05 832 42 99 1. 895 40 71
UHNDON GOrdon Lavon	INS"AT	Slo Cox	V-6(SV) USNH	843 62.05
ANNADI' Robert Nathan	<u>^</u>	81 c	USINATA	1, 886140171
0. TARLAND, George (Oal ILLING VI. HI DAVIA		0 4	W S (SY)	843162145
ALL THE DITON TO THE A	Bergerander an Alexander	u 🤺	WE AND AND	844162145 882190779 884770124
	And the second second second second		··· ····,	
AVERATIONAL INIGAN ANTON TOURIST MOODAVES	A The a block	L		844 71,116
	22		H	869284133
	-eu /	2	. Malle	875 40/43
ESE, SOAOL WOITHING		н н	USNE. VAC(BV)	306 07 01
IDELOTION THAT IS A DESCRIPTION	antinan Sty Frank	H	HOLDY)	861469 92*
INGER LOWELL'IVERLEYOUS		11	USINR	655 72 97
the second second second	· . · · ·	•••••••••••••••••••••••••••••••••••••••		
<u></u>				
	*****		** *****	
ALLET DAY 30 A BOY	and the second			

÷;,,	*****			
anien.			•• •••••••••••••••••••	*******
	***************************************	•••••••••••••••	•• •••••••••••••••••••	••••••
*			5 2 .	· · · ·
		••••••••••••••		***************
mmmildation Group		••••••••••••••••••••••••••••••••••••••		***************
ficer in Charge		•••••••••••••••••••••••••••••••••••••••		······
ficer in Charge:	: * 20	•••••••••••••••••••••••••••••••••••••••	· · · · · · · · · · · · · · · · · · ·	ана 1. социана 1. социана 1. социана 1. социана
ficer in Charge:! it: Unicers Mated Men:	199 			
ficer in Charge:	199 		USNR	668.77 69
ficer in Charge:	<u>199</u> 	SM3c	1.29	1
ficer in Charge:	<u>199</u> 	SM3c 4	USNR II	668 77 69 554 13 55
ficer in Charge:	199 An No. An Anna Anna Anna Willighth (1999) an	SM3c	USNR II	668 77 69 554 13 55

8

CONTRACT T					
CONFIDENTIAL					
SERIAL PD 148	508		ARMED FOR	AREA	<u>I</u>
1					DEADWEIGHT TONS 10,660
WHERE ARMED (PORT)	San Frenc	laco. Celif.	.DATE8/.3/.	43YA	Permanente ARD MatalaCac.
Number of Ca Guns and	Туре	Gun Mark and Modek	and Modek		Ammunition
assarias varing	#50(MP) #50(DP)			Aft. Fow'd	(200 rds. A
Barrage Scilloons	200 Maniput	181420	6-0		
Hadronen a +- 64	NOL OS	4-0	6-0	Bridge	((40,500 rd)
Suoyflake Flares	38 Cal.Rey	4-0 colvers.#304323	266510 274	705" 280852	240 sda
Sug Stight Blace	The face (Arrest)			8	A
BuOrd form Nr. 2	28 (rev. Ma)	(1942) submitted		, 19	.43, in triplicate
Smoke What Harl		Ehells INSTAL	LATIONS		and and a second se
Smoke Huat Hack	a ITEM	Estrum			AIL
1. Splinter Prot	ection - Brid	ge Machine Guns		Steel tube	l steel
2. Gun Foundat	oction - Au	Machine Guns		The second s	bridge is griff a
	ionar Numbe	r and Location			
	umper and	Location			
4		- 1	문화값, 정말	Grev	
19.20 APRIL 10	him We still to		HARAN MARINA TANA	Grey Grey	dentra auto mat
5. Darkening Sl	hip Facilities	3	Light	Grey Locks, Hlus 1	ightssuto
6. AReinforced S	hip Facilities	l Djárock st	Light	Steel sea ve	LYOB
6. Darkening S 6. MReinforced S 7. c Fire Control	hip Facilities & Chests Communicat	i Hon. System	Light	Steel sea ya 131 2 aft. 5	Lives bridge, 3 fow'd
 Darkening S. MREINFORCE S. GFIRE CONTON Sky, Look Out Results Indu 	hip Facilities Se Chests Communica Stations N Atrial Mana	ion System umber and Location fer's Inspection	Light	Steel ees ve 13: 2 art. 5 1-bridge None made	LYes
6. Darkening S 6. MReinforced S 7. c Fire Control	hip Facilities Se Chests Communica Stations N Atrial Mana	ion System umber and Location fer's Inspection	Light	Steel sea ya 131 2 aft. 5	LYes
 Darkening S. HReinforced S. GFire Control. Sky Look Out Results Indu Messing Facil 	hip Facilitie Ge Chests Communica Stations N Stations Manaj Strial Manaj	I	Light	Steel sea re 131 2 aft. 5 1-bridge None made Goods	LYes
 Darkening S. Darkening S. Fire Control. Sky, Look Ou Results Indu Messing Faci 	hip Facilities Le Chaste Communica Stations N actal Manaj lities <u>AC</u>	Ion System Umber and Location fer's Inspection CCOMODATIONS	Light n NAVY PERSO	Steel sea re 131 2 art. 6 1-bridge None wade Goods NNEL	Dridge, 3 fow'd
 5 Darkening S 6 ERSIMORCEO S 7 of Fire Control 8 Sky Look Ou 9 Results Indu 10. Messing Faci ARMED GUA Officer in Charge 	hip Facilities Communica Communica Stations, N arriar Manaj lities <u>AC</u> <u>RD UNIT</u> 1 Roo	tion System umber and Location for's Inspection <u>CCOMODATIONS</u> SPACE om NoGunner	Light NAVY PERSÖ s.RmR	Steel sea re 131 2 aft. 5 1-bridge None made Good NNEL LOCATIO ortside smids	Dridge, 3 fow'd
 Darkening Si Darkening Si Reinforced S GEIre Control, Sky Look Ou Results Indu Messing Faci ARMED GUA Officer in Charge Assistant O, I. C. Petty Officers 	hip Facilities Communica Stations N actial Manag lities <u>AC</u> RD UNIT 1 Roo None	Ion System Umber and Location Fer's Inspection COMODATIONS SPACE Im NoGunner No	Light n NAVY PERSÖ s. Em	Steel sea re 131 2 art. 6 1-bridge None made Qoods NNEL LOCATIC ortside amidal	Dridge, 3 fow'd Dridge, 3 fow'd DN DN Mps (Br. Deck)
 5 Darkening S 6 ERSIMORCEO S 7 CFIPE Control 8 Sky Look Ou 9 Results Indu 10. Messing Faci ARMED GUA Officer in Charge Assistant O, I. C. 	hip Facilities Communical Stations N atrial Manag lities <u>AC</u> <u>RD UNIT</u> 1 Roo None 1	Ion System under and Location for's Inspection CCOMODATIONS SPACE om NoGunner No Hospit	Light n NAVY PERSÖ s. Rm	Steel sea re 131 2 art. 6 1-bridge None made Qoods NNEL LOCATIC ortside amidal	Dridge, 3 fow'd Dridge, 3 fow'd DN DN Mps (Br. Deck)
 Darkening Si Darkening Si Reinforced S GEIre Control, Sky Look Ou Results Indu Messing Faci ARMED GUA Officer in Charge Assistant O, I. C. Petty Officers 	hip Facilities Communica Stations N actial Manag lities <u>AC</u> <u>RD UNIT</u> 1 Roo None	Ion System under and Location for's Inspection CCOMODATIONS SPACE om NoGunner No Hospit	Light n NAVY PERSO s. Rm	Steel sea re 131 2 art. 5 1-bridge None made 00005 NNEL LOCATIO ortside amids) tarboardside a	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft
 Darkening Si Darkening Si Reinforced S GEIre Control, Sky Look Ou Results Indu Messing Faci ARMED GUA Officer in Charge Assistant O, I. C. Petty Officers 	hip Facilities Communical Stations N atrial Manag lities <u>AC</u> <u>RD UNIT</u> 1 Root None 1 5 3	Ion System under and Location for's Inspection CCOMODATIONS SPACE om NoGunner No Hospit	Light NAVY PERSO s. Rm	Steel sea re 131 2 art 5 1-bridge None made Oogdo NNEL LOCATIO ortside amidsh tarboardside c """"""""""""""""""""""""""""""""""""	Dridge, 3 fow'd Dridge, 3 fow'd ON Mps (Br. Deck) Mft H
 Darkening Si Darkening Si Rephrocod S Arresolution Sky Look Ou Results Indu Messing Faci ARMED GUA Officer in Charge Assistant O. I. C. Fetty Officers Seamen 	hip Facilities Communical Stations N atrial Manaj lities <u>AC</u> RD UNIT 1 Roo None 1	Ion System umber and Location for's Inspection SPACE om NoGunner No Hospit No U U	Light NAVY PERSO s. Rm	Steel sea re 131 2 art 5 1-bridge None made Oogd NNEL LOCATIO ortside amidsh tarboardside c " ft amidships ortside art " amidsh	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "
 Darkening Si Darkening Si Rephrocod S Fire Control. Sky Look Ou Results Indu Messing Faci ARMED GUA Officer in Charge Assistant O. I. C. Petty Officers Seamen 	hip Facilities Gommunical Stations N atrial Manag lities <u>AC</u> <u>RD UNIT</u> 1 Rood None 1 6 3 7 TION GROUNDE	Ion System Umber and Location for's Inspection CCOMODATIONS SPACE om NoGunnar No Hospit No. fm. UP	Light NAVY PERSO s. Rm	Steel sea re 131 2 art 5 1-bridge None made Oogd NNEL LOCATIO ortside amidsh tarboardside c " ft amidships ortside art " amidsh	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "
 Darkening S Darkening S Barkening S Reinforced S GFIRE Control, Sky Look Off Sky Look Off Results Indu Messing Facility ARMED GUA Officer in Charge Assistant O. I. C. Fetty Officers Seamen COMMUNICA Officer in Charge 	hip Facilities Gommunical Stations N atrial Manag lities <u>AC</u> <u>RD UNIT</u> 1 Rood None 1 6 3 7 TION GROUNDE	Ion. System Umber and Location For's Inspection SPACE on NoGunner Norm. Hospit No .rm. U H	Light NAVY PERSÖ s. Bm	Steel sea re 131 2 art. 6 1-bridge None made 0000 NNEL LOCATIC ortside anidal tarboardside c " ft amidships ortside art amidships ortside art amidships	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "
 Darkening Si Darkening Si Rephrocod S Fire Control. Sky Look Ou Results Indu Messing Faci ARMED GUA Officer in Charge Assistant O. I. C. Petty Officers Seamen 	hip Facilities Gommunical Stations N atrial Manag lities <u>AC</u> <u>RD UNIT</u> 1 Rood None 1 6 3 7 TION GROUNDE	Ion. System Umber and Location For's Inspection SPACE on NoGunner Norm. Hospit No .rm. U H	Light NAVY PERSO s. Rm	Steel sea re 131 2 art. 6 1-bridge None made 0000 NNEL LOCATIC ortside anidal tarboardside c " ft amidships ortside art amidships ortside art amidships	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "
 Darkening S Darkening S Reinforced S GFire Control Sky Look Oil Sky Look Oil Results Indu Messing Faci ARMED GUA Officer in Charge Assistant O. I. C. Petty Officers Seamen COMMUNICA Officer in Charge Petty Officers Seamen 	hip Facilities Communical Stations N Stations N atrial Manag lities <u>AC</u> RD UNIT 1 Roo None 1 6 2	Ion. System Umber and Location For's Inspection SPACE on NoGunner Norm. Hospit No .rm. U H	Light NAVY PERSÖ s. Bm	Steel sea re 131 2 art. 6 1-bridge None made 0000 NNEL LOCATIC ortside anidal tarboardside c " ft amidships ortside art amidships ortside art amidships	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "
 Darkening Si Darkening Si Reihforced S Ar Fire Control. Sky Look On Results Indu Messing Faci ARMED GUA Officer in Charge Assistant O. I. C. Petty Officers Seamen COMMUNICA Officer in Charge Petty Officers Seamen 	hip Facilities Gommunical Stations N atrial Manag lities <u>AC</u> <u>RD UNIT</u> 1 Roo None 1 Roo 2 7 <u>TION GROU</u> 2	Ion. System Umber and Location For's Inspection SPACE on NoGunner Norm. Hospit No .rm. U H	Light n NAVY PERSÖ s. Rm	Steel sea re 131 2 art. 5 1-bridge None made Ocods NNEL LOCATIC ortside anids) tarboardside s " amidships tarboardside and midships.(Main	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "
 Darkening Si Darkening Si Reinforced S A. aFire Control. Sicy Look Ou Results Indu Messing Faci <u>ARMED GUA</u> Officer in Charge Assistant O. I. C. Fetty Officers Seamen <u>COMMUNICA</u> Officer in Charge Petty Officers Seamen 	hip Facilities Gommunical Stations N atrial Manag lities <u>AC</u> <u>RD UNIT</u> 1 Roo None 1 Roo 2 7 <u>TION GROU</u> 2	Ion System umber and Location for's Inspection COMODATIONS SPACE om NoGunner No. rm. Hospit No. fm. U H U U U Clerke	Light n NAVY PERSÖ s. Rm	Steel sea re 131 2 art. 5 1-bridge None made Ocods NNEL LOCATIC ortside anids) tarboardside s " amidships tarboardside and midships.(Main	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "
 Darkening Si Darkening Si Reinforced S G. Fire Control. Sky Look Ou Results Indu Messing Faci <u>ARMED GUA</u> Officer in Charge Assistant O. I. C. Petty Officers Seamen COMMUNICA Officer in Charge Petty Officers Seamen Seamen 	hip Facilities Gommunical Stations N atrial Manaj lities <u>AC</u> <u>RD UNIT</u> 1 Roo None 1 Roo 5 7 <u>TION GROU</u> <u>2</u> 	Ion System Umber and Location For's Inspection COMODATIONS SPACE MO. Gunnar No. TR. Hospit No. TR. Hospit UP MO. SPACE MO. TR. Hospit Subsection UP MO. SPACE MO.	Light n NAVY PERSÖ s. Rm	Steel sea re 131 2 art. 5 1-bridge None made Ocods NNEL LOCATIC ortside anids) tarboardside s " amidships tarboardside and midships.(Main	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "
 Darkening Si Darkening Si Reinforced S G. Fire Control. Sky Look Ou Results Indu Messing Faci <u>ARMED GUA</u> Officer in Charge Assistant O. I. C. Petty Officers Seamen COMMUNICA Officer in Charge Petty Officers Seamen Seamen 	hip Facilities Gommunical Stations N atrial Manaj lities <u>AC</u> <u>RD UNIT</u> 1 Roo None 1 Roo 2 7 TION GROU 2 2 15722	Ion System Umber and Location For a Inspection COMODATIONS SPACE MO	Light n NAVY PERSÖ s. Rm	Steel sea re 131 2 art. 5 1-bridge None made Ocods NNEL LOCATIC ortside anids) tarboardside s " amidships tarboardside and midships.(Main	Dridge, 3 fow'd Dridge, 3 fow'd DN ups (Br. Deck) uft "

1.10

PORT DIRECTOR'S REPORT ARMING MERCHANT VESSELS

CONFIDENTIAL

SOL.

SERIAL PD148508

ARMED (PORT) San Francisco Calis DATE Aug. 3. 1943

INSTA	LLATIONS		
	NUMBER	DET	TAILS
coustic Warning Devices	<u>0</u>	None turn	shed
arrage Balloons and Equipment lydrogen Gas Equipment	<u>0</u>	N 63-51-60	K)
ydrogen Gas Equipment	Q	1.5.75.52) N 3.521.45	
nowflake Flares	0	States and	
nowflake Flare Projectors	0	H #	бала боло со
noke Floats	0	H States	
noke Float Racks		N	
	••••••••••••••••••••••••••••••••••••••		

ing) it EQUIPMENT 1.513 ITEM 5 1.5.5 2.000 Merchant Marine Type L 1 Complete 2. Gas Masks for Merchant 45 3: Helmets for Merchant Crew 25 15 4. Life Rafts (Capacity 20 per raft) 11.14

4, 2-15 floats

Complete

Complete

2-31, 2-25 motor

5. Life Boats

6: Emergency Rations

7. Repair and Upkeep Equipment Armament

10 g -

8. Wake Light Screened

1.1 2 10 1 15

Fai

DEGAUSSING OPERATION 15 Rich Ame Compass Compensated Yew 1.9 18 to dress 18-8-83or Date Flashed nie 🕷 i zana je n 3.1 VERYS PAST AND ACT Lach -対象がない。

Degaussing Factor

(Trom Bange)

-8-A-

禄

S CIDENTIAL

PORT DIRECTOR'S MATERIAL REPORT FOR ARMED GUARD UNIT

NCS ON BOARD SS ... William H. Allen

	DESCRIPTION	STOCK NUMBER	TITLI
BAC	ghted #C&R 43479	24-B-60	Ç
BA'	nker-Signal Gun	17-B-7040	C
	shlight	17-B-7210	C
BA	y, Hand lantern	17-B-7600	C
BEI		L2-B-1520	B
BIN	~80	18-B-1185	B
	I-Gun, battery type	17-B-1600	B
	im, 1 quart	63-B-500	B
100	ini, i quare	38-B-5220-25	<u> </u>
BRU	ish, vārious sizes	5-B-228-88	- č
BU		S2-510	<u> </u>
<u>Ç</u> A:	rmed guard		
CLI	plies (brushes, soap, buckets,	rags, etc.)	
DE	TION GEAR		
	S, colored		B
FL	code #4	5-F-255-80	С
FL	ore	5-F-5100 to 5110	
FL	2 cell pocket type	17-F-18452	C
GO	okout, light density	37-G-3555	C
có	ookout, dark density	37-G-3450	C
	ble density	87-G-8755	Č
	nal ¾"	21-H-112	Č
		87-H	B
	standard	87-H	B
	to wear with headphone	L-H-1140	B
HQ	cal. revolver		- C
	t, swivel eye with rings	None	<u> </u>
LA	ntern	81-G-270	C
	signal gun	17-L-6800	Č
LA	ht	17-L-6820	Ċ
LA	nd, portable type "J"	17-L-7760	B
LIC	nulti-purpose kit	17-L-12929	B
LO	<i>n</i>	42-L-15180	C
MA	OO Mk. I		B
ME	BAG, equipment	S-2-03	
ME	8" small	37-M-330	Ç
	32" large	87-M-335	Č
		A(L)2-G-48116	ŤČ
	inition handling ashes		
PA	iy, formula 20 B	52-P	C
PA	2 canvas, 7'x8'	24-P-28	B
PE	, 2nd, 8rd repeaters	5-P-1127-77	C
PR	ife jacket type kapok Navy typ	pe 23-P-160	B
PE	meral, Set #4	5-F-4875 to 488	
RE	cal, S and W special	(L)2-4-705	B
RO	e, marine distress	4-R	C
RO	8" manila for spar	21-R-418	C
A P	TWINE, needles, wax, etc.		C
SP.	elect signalling 12" or better	r 17-S-4000	B
00	, signal 8"	17-S	B
SP	1 91811 U	28-5-180	B
01 00	artermaster, 16 power	18-S-2255	B
16	Artermaster, 10 power	10-0-6600	<u>م</u>
S.L.	(#Do items) (not over \$30)	00640	
	.S, and cartridges	2-r 02 4-U	B
Ar			
ST. VE	(#53 items) (not over \$80) S, and cartridges		2-P & 4-C

4-

: 13		A strength of the strength of
	AL NO. PD149500	
S. W. K.	ARMED GUARD CENTER REPORT OF MATER FURNISHED TO ARMED GUARD UNITS	ALS
eo	NEIDENTIAL	MS SSMillism.H. Aller
	INSTRUCTIONS ISSUED TO ARMED GUARD OFFICER	
1.	Ordnance and Gunnery Instructions for Armed Guards	
2.	General Instructions for Commanding Officer of Naval	11
	Armed Guards on Merchant Ships	в
3.	Wartime Instructions for U.S. Merchant Vessels	······
4.	Test Firing of Guns After Leaving Port (CNO ltr.)	U.
	No. 396123 of 1 December, 1941-Attached to Orders	
5.	SAFETY PRECAUTIONS - (Condensed from Naval Regulations,	u
	for Armed Guard Officers)	
6.	SILHOUETTES	
	Aircraft	11
	Signals for Control of Merchant Vessels by Aircraft	
7.	Publication of German Raider Tactics	
8.		
9.	Anti-Aircraft Machine Gun Training Centers	

MOVABLE EQUIPMENT ISSUED TO ARMED GUARD UNIT

.....

ITEM	QUANTITY	STOCK NUMBER	DESCRIPTION	
		FOUL WEAT	THER CLOTHING	
1	20	37-C-2148	Coats, short	
2.	1	37-C-2130	Coats, long	
		87-H-665	Hats	
3.	27	37-T-305-50		

WATCH STANDERS COLD WEATHER CLOTHING

5.	12	72-A-600	Arctics
6		37-C-2850	Coats (submarine woolen)
7		37-T-325-62	Trousers (submarine woolen)
8	12	37- J-154-164-5	
9	<u>+0</u>	87-T-826	Trousers (Jungle cloth)
10.		38-M-410	Mittens (II II)
+ •••			

Jungle cloth makes and helmets SPECIAL WINTER CLOTHING

12

11		Suits, complete
12.	37-C-2172	Coats, sheepskin

HEAVY WINTER CLOTHING

13		Coats, sheepskin
10,	27 0 0170	Quite complete
14.	37-C-2172	Suits, complete

--5---

.

	COUDITI	ON II WATCH	
	SECTION		
	P. 0.		· · · ·
		OURS OF THE WATCH	4
LOOKOUT			STANDBY
20M #1		3" 50	
20M #2	, · · · ·	3" 50	
CONTROL		· · · · · · · · · · · · · · · · · · ·	
20 <u>M,</u> #3	•	2014 7/5	
20M #4		2011 7:6	
20m #7		4" 50	
20m #8		4" 50	
		URS OF THE MATCH	
20M #1		3" 50	
20м #2		3" 50	
CONTROL 20M #3		2014 #5	
20M #4		20M #6	
20M #7		4 ¹¹ 50	
		4" 50	
	ED IN GUNC CREW QU		
SHOWING	THE WATCH TO WHI	CH EACH SECTION	IS ASSIGNED.



COASTAL FISHERIES 4200 SMITH SCHOOL ROAD AUSTIN, TEXAS 78744 1-800-792-1112 www.tpwd.state.tx.us

PWD RP V3400-491 (4/99) In accordance with Texas State Depository Law, this publication is available at the Texas State Publications Clearinghouse and/or Texas Depository Libraries.