NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name Lightship No. 83, "Blunts," "San Francisco," "Relief"
other names/site number Lightship "Relief"

2. Location

street & number Central Waterfront at Moss Bay ☐ not for publication
city, town Kirkland ☐ vicinity
state Washington code 53 county King code 033 zip code

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
		Contributing	Noncontributing
☒ private	☐ building(s)	_____	_____ buildings
☐ public-local	☐ district	_____	_____ sites
☐ public-State	☐ site	1	_____ structures
☐ public-Federal	☒ structure	_____	_____ objects
	☐ object	_____	_____ Total

Name of related multiple property listing:
_____

Number of contributing resources previously listed in the National Register 1

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ☐ nomination ☐ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

_____ _____
Signature of certifying official Date

_____
State or Federal agency and bureau

In my opinion, the property ☐ meets ☐ does not meet the National Register criteria. ☐ See continuation sheet.

_____ _____
Signature of commenting or other official Date

_____
State or Federal agency and bureau

5. National Park Service Certification

I, hereby, certify that this property is:

☐ entered in the National Register.
☐ See continuation sheet. _____ _____

☐ determined eligible for the National Register. ☐ See continuation sheet. _____ _____

☐ determined not eligible for the National Register. _____ _____

☐ removed from the National Register. _____ _____

☐ other, (explain:) _____

_____ _____ _____
Signature of the Keeper Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)
Government-Aid to Navigation

Current Functions (enter categories from instructions)
Museum

7. Description

Architectural Classification (enter categories from instructions)
N/A

Materials (enter categories from instructions)
foundation N/A
walls N/A
roof N/A
other N/A

Describe present and historic physical appearance.

Formerly "Blunts Reef" and "San Francisco," the 1904 lightship No. 83, now known by her last U.S. Coast Guard designation of "Relief" (WAL 508), is a floating historic museum vessel moored at the Moss Bay Marina on Lake Washington on the central waterfront of Kirkland, Washington. "Relief" was listed in the National Register of Historic Places at a National level of significance on April 23, 1975. Owned and operated by Northwest Seaport Museum, Inc., of Seattle, "Relief" is slowly undergoing preservation and restoration work.

No. 83 as Built and Modified During Her Career

As built in 1904, the lightship designated No. 83 was a steel-hulled vessel 112 feet in length with a 28.6-foot beam, a 15.4-foot depth of hold, and a 12.6-foot draft. Enlarged in 1929 to 129.8 feet, the vessel is registered at 465 gross tonnage and 188 net tonnage and displaces 668 tons. [1] Built to the characteristic lines of a 20th century American lightship, No. 83's double-riveted hull was constructed to be strong and seaworthy. As a typical lightship hull, No. 83 shared many characteristics with her contemporary and later steel sisters:

> The American vessel generally...has her lighting elements divided into two, and two lamps are arranged, one each at the top of a pole mast. Cones, cages, and other day marks are arranged on the masts above or below the lanterns....There is usually a bar keel, big rise of floor, and large tumble home, the outline of midship section being somewhat reminiscent of that of an icebreaker. The sheer is severe, rising rapidly both to the bow and to the stern. The bow is a strong

[X] See continuation sheet

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:
☐ nationally ☐ statewide ☐ locally

Applicable National Register Criteria ☐ A ☐ B ☐ C ☐ D NHL CRITERIA 1, 4

Criteria Considerations (Exceptions) ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
Government	1905-1960	1905, 1931
Humanitarian	1905-1960	
Architecture (Naval)	1905-1960	

NHL XIV-B
Transportation: Ships, Boats, Lighthouses & Other Structures

Cultural Affiliation
N/A

Significant Person
N/A

Architect/Builder
New York Shipbuilding Co.
U.S. Lighthouse Establishment

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The 1904 lightship No. 83, now known by her last official designation of "Relief," is one of a small number of preserved historic American lightships. Essential partners with lighthouses as aids to navigation along the coast of the United States, lightships date to 1820 when No. 1 was commissioned. Built as part of a five-vessel contract, No. 83 and her surviving sister are the earliest surviving examples of American lightships. Of these various vessels, only No. 83 has retained her original marine steam engine and machinery, and hence is not only one of the oldest surviving American lightships, but also the lightship with the greatest integrity of design and form. As such, "Relief" is of national significance. While her superstructure and lights were "modernized" in the early 1930s, these changes reflect modifications to better enable the vessel to carry out her historic function. Built to serve as the second lightship in California and one of the first four lightships on the Pacific coast of the United States, No. 83 served to guide mariners to three major ports--Eureka on Humboldt Bay, San Francisco, and Seattle, with much of her career spent on the two former stations. While regionally based, No. 83 had a profound impact on the nationally-significant Pacific coast trade and on arriving and departing intercoastal and international vessels.

The preceding statement of significance is based on the more detailed discussion which follows.

☒ See continuation sheet

9. Major Bibliographical References

SEE FOOTNOTES IN TEXT

☐ See continuation sheet

Previous documentation on file (NPS):
- ☐ preliminary determination of individual listing (36 CFR 67) has been requested
- ☒ previously listed in the National Register
- ☐ previously determined eligible by the National Register
- ☐ designated a National Historic Landmark
- ☐ recorded by Historic American Buildings Survey # _____
- ☐ recorded by Historic American Engineering Record # _____

Primary location of additional data:
- ☐ State historic preservation office
- ☐ Other State agency
- ☐ Federal agency
- ☐ Local government
- ☐ University
- ☒ Other

Specify repository: Northwest Seaport Seattle

10. Geographical Data

Acreage of property Less than one acre

UTM References

	Zone	Easting	Northing
A	10	559520	5280250
B			
C			
D			

☐ See continuation sheet

Verbal Boundary Description

All that area encompassed by the extreme length and beam of the vessel.

☐ See continuation sheet

Boundary Justification

The boundary encompasses the entire area of the vessel as she floats at her berth.

☐ See continuation sheet

11. Form Prepared By

name/title James P. Delgado, Maritime Historian
organization National Park Service (418) date July 9, 1988
street & number P.O. Box 37127 telephone (202) 343-4104
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> forging and sharply raked, containing the hawse pipe for the mushroom mooring anchor. There is also the hawse pipe for the standby anchor. The stern is of stereotypical single knuckle type and contains the rudder, sternpost of usual construction, and the propelling wheel....The ships generally have two complete decks and a third part deck forward and aft of the machinery space. Side doors in the hull give access to the second deck and tend to follow...characteristic side loading.... [2]

No. 83 is painted in the original colors used on American lightships after the 1930s. Her hull is bright red, with buff or spar colored masts and superstructure, and the name of her station painted in bold block letters on the hull. Originally painted as "Blunt's Reef," she was repainted "San Francisco" in 1930 and "Relief" in 1951.

The design of No. 83 reflected improvements made in lightship design by the United States Lighthouse Establishment (USLHE). Among those improvements, as embodied in No. 83, were the placement of the hawse pipe in the bow as opposed to immediately abaft the stem, the installation of bilge keels to reduce rolling, a reduced metacentric height, an increased bow height and sheer, and most importantly a shift from wood to metal hulls and unpowered to powered vessels. An improved version of the first generation "modern" lightships, No. 83 was a drier, roomier vessel with greater ability to stay on station in the roughest seas. [3]

The principal feature of the vessel above decks were the two steel masts that mounted the lights. The foremast was and is 52.9 feet above deck level, and the mainmast stands 53.2 feet. Originally surrounded by wooden lamp-trimmer's cabins on the weather decks, the masts mounted three oil-burning lamps which were trimmed and lit in the cabins and then winched to the truck of the mast. Only one mast's lamps were lit--usually the foremast's--with the mainmasts's lamps serving as a relief when oil was added to the foremast lamps. Between the two masts stood the single stack and a 12-inch diameter steam fog whistle.

No. 83 was built with a 380-h.p. compound reciprocating marine steam engine and two tubular coal-fired boilers that drove No.

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83's single screw. The engineroom was flanked forward by the two coal bunkers, which could be filled through side doors in the hull. The bunkers held 75 tons of coal each for a total capacity of 150 tons. The lightship also carried 11,650 gallons of freshwater for drinking and cooking. Also below deck, and forward of the engineroom was the forecastle, which, rather than providing crew quarters, housed the lightship's steam pump brake windlass and protected it from weather and heavy seas. Manufactured by the Hyde Windlass Co., the Model #6 windlass, which is in place, has 9- X 9-inch engines and was capable of raising No. 83's 3-ton mushroom anchor. The anchor cable, a heavy forging weighing 200 lbs. per fathom, was deployed for 540 feet; the lightship usually moored in 30 fathoms (180 feet), and the long deployment gave the lightship seaway without additional strain on the cable.

Below the weather deck, crew quarters for No. 83's complement of 15 (11 on duty at all times) were built. The quarters, proudly described in 1905 by the USLHE as "roomy, comfortable, and well-ventilated staterooms," were built to provide better amenities of life for lightship crews. [4] Officers' quarters were built aft at the stern. These quarters remain basically unaltered. Beautifully-appointed joinery including pilasters and panelled walls distinguish the cabins. The cabins line the hull and open into a central wardroom. Forward of these cabins are the crew quarters, galley, and mess, less ornate but nonetheless meeting the USLHE's claim of being roomy, comfortable, and well ventilated.

In the course of her career as a lightship, No. 83 underwent several modifications. The major modification was the shift from coal to diesel-fired boilers in the 1930s. The coal bunkers were converted into oil tanks, the side doors welded shut, and two Babcock and Wilcox boilers were installed. Unlike other lightships converted fully to diesel or diesel electric, No. 83 remained a steamship, with her original steam engine and auxiliary steam machinery. The second major change involved the lights. In 1908 the original sperm-whale oil lights switched to kerosene, increasing the range of the light from three to nine miles. In 1920 the vessel was electrified, with the range increasing to 15 miles. The last major alteration to the lights occurred in the early 1930s, when a 1,000-watt light in 375-mm cut-glass 15,000-candlepower lens (then the standard optic for lightships) was installed atop each mast. The shift in lighting

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systems doomed the lamp-trimmer's sheds on deck, and the forward house was removed in 1934 and the present pilothouse with master's cabin, and a radio shack were added. The last alteration was the installation of steam diaphone whistles on the foremast in 1935 to replace the original 12-inch whistle installed in 1904.

No. 83's Present Appearance

Since her retirement in 1960, No. 83 has undergone no alteration. The vessel is in fair condition; the hull is sound though thin in a few spots. The leaking decks were recently patched with mastic and plywood after water leaked into the accommodations aft and damaged the woodwork in some cabins, most seriously on the starboard beam. The superstructure is intact with all features in place including the 375-mm lenses atop the masts. The wires between the engineroom and the lamps were cut when the lightship was decommissioned, but the volunteer crew believes the light system can easily be restored to operation.

Despite some evidence of deterioration, the vessel retains a remarkable integrity. All original fittings are in place, including the ship's massive bell mounted forward at the bow with the legend "USLHE, 1904" on its face. The pilothouse retains the original wheel, telegraphs, and speaking tubes. The most striking feature of the vessel is the compound reciprocating marine steam engine and steam auxiliary machinery. The massive engine, complete with a polished hardwood casing and polished brass fittings, dominates the engineroom. The engine can be turned over by hand and is free of rust; smaller equipment is in excellent condition, with little surface rust, and with overhauled boilers and some work, No. 83 could be steamed up once again.

NOTES

1
Thirty-Eighth Annual List of Merchant Vessels of the United States (Washington, D.C.: Government Printing Office, 1906) and James P. Delgado, ed. Evaluative Inventory of Large Preserved Historic Vessels in the United States (Washington, D.C.: National Park Service, 1987), entry for "Relief."

SEE CONTINUATION SHEET

2
A.C. Hardy, American Ship Types: A Review of the Work, Characteristics, and Construction of Ship Types Peculiar to the Waters of the North American Continent (New York: D. Van Nostrand Co., Inc., 1927) pp. 254-256.

3
Ralph C. Shanks, Jr. and Janetta Thompson Shanks, Lighthouses and Lifeboats of the Redwood Coast (San Anselmo, California: Costano Books, 1978) p. 143.

4
Ibid., p. 139.

THE DEVELOPMENT OF THE AMERICAN LIGHTSHIP

While the first American lighthouse dates to the colonial era, the use of lightships is a more recent 19th century phenomenon in the United States, though employed earlier in Europe. Moored on treacherous reefs, or marking the narrow approaches to a channel or harbor entrance where lighthouses could not be built or placed in areas too far offshore for a shoreside lighthouse's lens to reach, lightships were fewer in number than the hundreds of existing lighthouses--in all, less than 200 lightships were built between 1820 and the 1950s, and in 1909, the heyday of the United States Lighthouse Establishment, there were 51 lightships (46 on the eastern seaboard and five on the Pacific Coast) on station in the United States.

The more famous and significant lightship stations included "Ambrose," marking the southern entrance into New York harbor along the New Jersey coast; "Nantucket," marking not only the entrance to Boston harbor but also the American end of the transatlantic route; "Diamond Shoals" off the Outer Banks of North Carolina, which marked a dangerous spot along the coastal ocean highway by way of the Gulf Stream; and "San Francisco" on the bar three miles out from the Golden Gate. The first lightship, No. 1, was a small wooden sailer moored on Chesapeake Bay. From this pioneer, the lightship type developed through the 19th century from sail to steam, from wood to iron to steel hulls, and to more powerful optics. Numbered sequentially as they entered service under the United States Lighthouse Board, later the United States Lighthouse Establishment, lightships like lighthouses remained at a constant location, with new vessels replacing the old. Thus there were more than one "Nantucket," "Ambrose," "Diamond Shoals," and "San Francisco," as well as others, on the various stations through the years. [1]

By the end of the 19th century, hard-learned lessons had resulted in a standardization of lightship form and design. Heavily constructed steel hulls moored with massive mushroom anchors; strongly forged huge cables, built to ride out storms and rough seas; decks designed to let the water run off; and a dual mast system to always keep a light lit; characterized the "typical" lightship in the United States. Technological advances--the introduction of electrical lighting, welded hulls, and the switch from steam to diesel to diesel electric engines--brought

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modifications to the lightship without necessarily changing the basic form. While older lightships were modified to accept the technological changes, new classes of ships were also built to embody the technology. Thus the first class of lightships built in the 20th century with riveted steel hulls and massive steam engines--numbering in the high 70s through the low 80s--were replaced at some stations by welded steel lightships such as the Pacific Coast's No. 100 with diesel electric propulsion, diaphone air horns, 1,000-watt electric lights in 375-mm lenses, and a reduced tonnage (with the installation of a less heavy diesel electric system) meaning less resistance to the sea and hence less battering. [2]

In 1950, a new (and the last) class of lightship was introduced under the auspices of the United States Coast Guard, which had absorbed the U.S. Lighthouse Establishment in 1939. Constructed of modern, welded hulls with diesel engines, and offering more amenities of life for their crews, these vessels closely resembled in appearance, the lightships of the early 20th century and the 1930s, a number of which were still in commission. Technology brought an end to manned lightships about the same time manned lighthouses were being considered for automation. Large navigational buoys 40 feet in diameter and 42 feet high, painted lightship red with automatic lights, fog signals, and radio beacons, began to replace lightships in 1967, and by the beginning of the 1980s the last lightship had been retired, ending a 150-year maritime tradition in the United States.

CONSTRUCTION AND CAREER OF NO. 83

The first lightship on the Pacific coast of North America was a Canadian vessel moored at the mouth of the Fraser River, near Vancouver, British Columbia, in 1866. The first American lightship on the Pacific Coast was not built until 1892. Constructed at the Union Iron Works in San Francisco, the 123-foot No. 50 was sent north to the mouth of the Columbia River on Oregon's coast. In all, only five lightships were placed on the Pacific coast by the United States, because of the predominately high, rocky coastline and deep water running up close to shore. These conditions were conducive to the construction of lighthouses to guide mariners, though a few locations required lightships. In addition to the rugged Columbia River Bar, the next most dangerous, heavily navigated site requiring a lightship

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was the San Francisco Bar. Fanning out three miles from the coast, the San Francisco Bar shoals near the surface and poses a formidable challenge to safe navigation. To mark the channel leading across the bar, the second lightship built by the United States for the Pacific Coast, No. 70, was sent to San Francisco. Constructed at Portland, Oregon, in 1897, the steel-hulled No. 70 arrived on station on April 7, 1898, commencing lightship service in California. [3]

The success of No. 70 underscored the need for another California lightship. Just 185 miles north of San Francisco, off Cape Mendocino and close to the entrance to the busy harbor of Eureka in Humboldt Bay, was a 3- X 4-mile patch of submerged rocks known as Blunts Reef, termed by the Lighthouse Service a "wild and desolate section of the California coast." [4] The active Pacific Coast lumber trade was at its peak by 1900, with hundreds of vessels carrying loads of timber and passengers from northern ports, notably Eureka, to San Francisco. A lightship to protect these ships, as well as vessels ranging up the coast to Oregon, Washington, British Columbia, and Alaska was needed. When Congress appropriated funds in March 1903 to build new lightships, the U.S. Lighthouse Establishment decided two vessels would be sent to California, one for Blunts Reef, the other as a relief vessel. Built as one of a five-vessel contract by the New York Shipbuilding Co. of Camden, New Jersey, a firm of considerable reputation and ability that successfully built a number of vessels for the U.S. Government, including battleships and other naval vessels, No. 83 was laid down and launched in 1904 as the "Blunts Reef" lightship. Fitted out and dispatched from New York with No. 76, which was to serve as relief, No. 83 steamed around Cape Horn, arriving at San Francisco with No. 76 on June 4, 1905, after a 110-day voyage. Coaled, reprovisioned, and watered, No. 83 proceeded to station, arriving at Blunts Reef and entering into duty on June 28. [5]

Relieved by No. 76 when necessary, No. 83 remained at Blunts Reef, riding out storms and lighting the dangerous stretch of the coast. With orders to remain at station despite the severity of storms, No. 83 was subjected to incredible weather, being blown off station six separate times in 1906 and 1907. Rammed by the steam schooner "Del Norte" in 1910, No. 83 was heavily damaged and retired to San Francisco for repairs. On another occasion,

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in June 1916, 155 survivors from the stranded coastal steamer "Bear" rowed through heavy seas and thick fog to find refuge in No. 83, crowding the suddenly tiny lightship. The lightship remained on station at Blunts Reef until 1930, when she was replaced by a new diesel electric vessel, No. 100, first of a new class of lightships. With the arrival of No. 100, No. 83 was transferred to another important station--the San Francisco Bar, relieving No. 70, which was then retired. For the next 21 years, No. 83 served as guide to the entrance to the busy port of San Francisco Bay. Modernized in her new role as "San Francisco" lightship in the early 1930s, No. 83 was redesignated WAL 508 in 1939 when the US Lighthouse Establishment was absorbed into the U.S. Coast Guard. Manned by Coast Guard crews, No. 83 took on a more direct military role in 1942, when she served as a patrol and guard boat off the Golden Gate following the United States' entry into the Second World War. [6]

Replaced in 1951 by a new Coast Guard-built lightship, WAL 612, old No. 83 was sent north as a relief lightship. Redesignated "Relief," she served as such at the Columbia River Bar, Umatilla Reef and Swiftsure Bank, at the latter marking the approaches to Puget Sound and its active ports. The 56-year career of No. 83 ended on July 18, 1960, when she was decommissioned at Seattle. Acquired later by Save Our Ships, a Seattle-based organization that later became Northwest Seaport, Inc., the ship, known as "Relief" has been moored at Kirkland, Washington, where she is periodically open to the public and awaiting final restoration.

NOTES

1
See George R. Putnam, Lighthouses and Lightships of the United States (New York: The Houghton-Mifflin Co., 1917).

2
A.C. Hardy, American Ship Types: A Review of the Work, Characteristics, and Construction of Ship Types Peculiar to the Waters of the North American Continent (New York: D. Van Nostrand Co., Inc., 1927) pp. 254-257, passim.

SEE CONTINUATION SHEET

3 Ralph C. Shanks, Jr. and Janetta Thompson Shanks, Lighthouses and Lifeboats on the Redwood Coast (San Anselmo, California: Costano Books, 1978) pp. 133-135.

4 Ibid., p. 139.

5 Ibid.

6 Ibid., pp. 140-145, passim. Also see Terry Pettus, "The Last of the Old Steam Lightships Is Home from the Sea," (January 1963), manuscript on file at Northwest Seaport Museum, Inc., Seattle and the Bellevue (Washington) Journal-American, July 6, 1987.