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

OMB No. 1024-0018

United States Department of the Interior
National Park Service

JUN 12 1989

NATIONAL REGISTER

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: Freighter WILLIAM A. IRVIN
other names/site number: N/A

2. Location

street & number: Minnesota Slip, Duluth Harbor ☐ not for publication N/A
city, town: Duluth ☐ vicinity N/A
state: Minnesota code: MN county: St. Louis code: 137 zip code: 55802

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	1	Total

Name of related multiple property listing: N/A

Number of contributing resources previously listed in the National Register: 0

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.

Nina M. Archabal — 5/31/89

Signature of certifying official: Nina M. Archabal — Date

Minnesota State Historic Preservation Officer

State or Federal agency and bureau: Minnesota Historical Society

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:) _____

Entered in the National Register

Signature of the Keeper — Date of Action — 7/13/89

6. Function or Use

Historic Functions (enter categories from instructions)	Current Functions (enter categories from instructions)
TRANSPORTATION/water-related	RECREATION AND CULTURE/museum

7. Description

Architectural Classification (enter categories from instructions)

Other: Steel bulk freighter

Materials (enter categories from instructions)

foundation N/A
walls N/A
roof
other Steel
Brass

Describe present and historic physical appearance.

As built in 1938, WILLIAM A. IRVIN is a steel-hulled bulk freighter measuring 610.9 in length, with a beam of 60.0 feet, and a depth of hold of 32.6 feet. WILLIAM A. IRVIN is registered at 8240 gross tons and 6072 net tons. She was built in 1938 by the American Ship Building Company of Lorain, Ohio for the Pittsburgh Steamship Company, which was owned by U.S. Steel. For 40 years WILLIAM A. IRVIN transported iron ore and coal between ports in Duluth and Two Harbors, Minnesota, and Gary, Indiana, South Chicago, Cleveland, Lorain, and other docks in Ohio. She was retired from active service in 1978 after carrying coal from Sandusky, Ohio to Duluth. In 1986 WILLIAM A. IRVIN was renovated and permanently moored in the Duluth harbor at the Minnesota Slip where she is open seasonally for public tours.

The arch-constructed, transverse-framed WILLIAM A. IRVIN was built with a slanted stern. Eighteen 11' by 38' hatches located on the spar deck cover three massive watertight compartments where about 14,000 tons of cargo were stored. The five-ton steel hatches are both telescoping leaf and one-piece in design, and are handled by an electric hatch crane which travels on deck-mounted rails.

Powering the WILLIAM A. IRVIN are two 2,300 horsepower cross compound type steam turbine engines built by the De Laval Turbine Company. The engines are located in the pump room deck (or working deck of the engine room) and connected through a double reduction gear to the propeller shaft. The propeller measures 15'6" in diameter and has four 8'-long bronze blades. Located on the same level as the pump room deck is the chief engineer's office, turbine generators, steam evaporators for boiler make up water, and the electrical control room. Situated on the open deck above are the rudder steering motor, the paint locker, and the laundry room.

The forward section of the WILLIAM A. IRVIN holds the pilothouse, an upper deck, the forecastle deck, and the spar deck forward. Inside the pilothouse are two radar sets, a radio direction finder, various instruments and gauges for guiding the ship, and an FM radio for communicating with other vessels. Much of the pilothouse contains polished brass railings and trim and all of this equipment is original and unaltered. Adjacent to the pilothouse is the chart room where navigation charts are stored.

[x] See continuation sheet

The remaining forward decks contain the captain's office, his living quarters, and for guests, four staterooms and a lounge. Located on the spar deck between hatches 1 and 2 is the guests galley and dining room. The galley is equipped with stainless steel sinks and cupboards where a special cook and steward prepared and served meals to the guests. The adjoining dining room has oak paneled walls and a chandelier above the table. Each of the four staterooms has two beds, a false fireplace, walnut paneling, and an Art Deco-inspired bathroom. Again, all equipment and furnishings are original.

WILLIAM A. IRVIN is located in an appropriate setting at her port of call in the Minnesota Slip, in close proximity to the docks which originally transported iron ore to the Great Lakes freighters. Her materials have been carefully maintained and the design is unaltered (except for a gangway cut in the hull to accomodate tourists) since she was constructed in 1938. All of WILLIAM A. IRVIN's significant physical characteristics are clearly visible, and her mooring at the Duluth waterfront adds to her integrity of feeling and association.

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

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

Areas of Significance (enter categories from instructions)	Period of Significance	Significant Dates
ENGINEERING	1938	1938
MARITIME HISTORY		
TRANSPORTATION		

Cultural Affiliation: N/A

Significant Person: N/A

Architect/Builder: American Ship Building Company, builder

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

The WILLIAM A. IRVIN is historically significant in the statewide context "The Iron Range, 1880s-1930s" for the active role she played in Great Lakes maritime commerce by transporting iron ore and coal between northern Lake Superior and several ports in the southern inland seas. The design of WILLIAM A. IRVIN is also significant in the development of Great Lakes bulk ore carriers because it features several trend-setting innovations which represented the most up-to-date technological advances in freighter construction following the Depression.

Historically, iron ore has been extracted from three areas or "ranges" in Minnesota: the Vermilion, the Mesabi, and the Cuyuna Ranges. Iron ore was shipped from Minnesota's first iron mine on the Vermilion Range in 1884. In 1890 ore was discovered on the more extensive Mesabi Range, and two years later the first ore was shipped from Mountain Iron. Extending for approximately 100 miles, the Mesabi Range was destined to become the nation's largest iron ore producer.

In 1893 the Duluth, Mesabi and Northern Railway Company built the first iron ore dock in Duluth and by 1920 the harbor had ten steel and concrete ore docks. Except for the railroads, the most important arterial routes for shipping ore were on the Great Lakes, and because of its strategic location Duluth became a major link in the transcontinental transportation of iron ore, coal, and grain. From 1901 to 1930 114.7 million gross tons of natural ore--approximately 60% of the nation's total--were shipped from Minnesota, with the majority originating in Duluth.

The first modern Great Lakes ore carrying vessel, the 300-foot-long iron-hulled ONOKO, was launched in Cleveland in 1882. Steel hulls replaced iron with the introduction of the SPOKANE in 1886. One of the more popular types of ore freighters until the end of the 19th century was the whaleback, designed by Captain Alexander McDougall and introduced in 1888. The only extant whaleback, the METEOR (1896, NRHP), is permanently moored

☒ See continuation sheet

in Superior, Wisconsin. The only other vessel in the upper Great Lakes related to the iron ore industry and listed in the Register is the VALLEY CAMP (1917), also built by the American Ship Building Company and moored in Sault St. Marie, Michigan.

As Minnesota's rich iron ore resources became developed, lock sizes and channel depths increased on the Great Lakes, resulting in more traffic and longer ships. From the time roughly between the two World Wars lake freighter design and construction became quite standardized. Ships 600 feet long, with 60-foot beam and 32-foot depth were common. They had riveted steel hulls with sectional steel hatch covers that replaced wooden hatch boards. Nearly all were powered by triple-expansion steam engines with fire-tube "Scotch" boilers. In 1926 the steamer LEMOYNE marked the first variation from the typical lake freighter; it was 633 feet long and designed with a short depth primarily as a grain carrier. The ROBINSON introduced turbo-electric drive to the Great Lakes fleet in 1925.

Four bulk ore carriers built in 1938 for U.S. Steel's Pittsburgh Steamship fleet set the precedent for a new era of ship design and construction. The IRVIN, named for the president of U.S. Steel from 1932-1938, had her maiden voyage on 25 June 1938. She was U.S. Steel's flagship and known as the "Pride of the Silver Stackers" in reference to the color of the black-banded smokestacks that were a trademark of U.S. Steel's Great Lakes fleet. Three other nearly identical ships -- the GOVERNOR MILLER, JOHN HULST, and RALPH H. WATSON -- were designed and constructed at the same time as the IRVIN. The GOVERNOR MILLER last sailed in 1974 and was scrapped in 1980. The JOHN HULST and the RALPH H. WATSON sailed until 1980 and both were scrapped within the last six years.

WILLIAM A. IRVIN was the first major bulk freight ship constructed on the Great Lakes following the Depression, and she incorporated a number of new technical advances in the shipbuilding industry. She introduced to the lakes the use of cross compound turbine engines which replaced the conventional reciprocating engines. Another innovation was the location of boilers in the forward end rather than the after end of the boiler room, which allowed a continuous flow of fuel from the coal bunker to the boiler through the use of an automatic coal conveyor. Side tank bulkheads were extended up to the spar deck, creating two tunnels for protected passage fore-and-aft during stormy weather. Steel hatch covers, carried mechanically by a special movable deck crane, were also introduced. Much of the hull, including the side hoppers, tank tops, coal bunkers, and cabins, were electrically welded instead of riveted.

In addition to her design and construction, the IRVIN is distinctive because she was outfitted to serve as the flagship for U.S. Steel's Great Lakes fleet. Specific accouterments distinguished the IRVIN from other freighters. The elegant staterooms, dining room, and observation deck lounge which delighted those on board were first used by William and Gertrude Irvin and their honored guests. These guests were not merely casual passengers: under Coast Guard regulations, a "guest" was invited aboard by the company which owned the vessel, whereas a "passenger" had paid for the excursion. All of the guests (who were often served fresh Maine lobster for dinner) traveled on the WILLIAM A. IRVIN courtesy of U.S. Steel, which provided this unusual seven-day round trip vacation as a way of thanking their most loyal and wealthy customers, and enticing prospective investors. Guests could play shuffleboard, drive golf balls off the deck, and often participated in constructing and flying kites. The ship was kept in immaculate condition and the 36-member crew was always expected to look presentable and act with more decorum than on other vessels. The fine reputation of the WILLIAM A. IRVIN was noted by Captain John J. MacDonough in his final entry of the ship's log in 1986: "She was the Queen of the Lakes and so shall she remain for the rest of her days."

9. Major Bibliographical References

See continuation sheet.

[x] 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
- [x] Other

Specify repository: Canal Park Marine Museum Library, U.S. Army Corps of Engineers, Duluth, MN

10. Geographical Data

Acreage of property Less than one

UTM References

	Zone	Easting	Northing		Zone	Easting	Northing
A	15	568900	5181260	B			
C				D			

[ ] See continuation sheet

Verbal Boundary Description

The WILLIAM A. IRVIN 611' x 60' at permanent berth at the Minnesota Slip in the Duluth harbor, Duluth, MN.

[ ] See continuation sheet

Boundary Justification

The boundary for the WILLIAM A. IRVIN occupies only that area enclosed within her extreme dimensions.

[ ] See continuation sheet

11. Form Prepared By

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Ericson, Bernard E. "The Evolution of Great Lakes Ships: Part II - Steam and Steel," Inland Seas Vol.25, no.3. (Fall 1969): 199-212.

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