

U.S. Department of
Homeland Security

United States
Coast Guard



Director
National Vessel Documentation Center

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16713/5/2
September 25, 2012

Mr. William Hayden, PE
Principal Engineer
Waller Marine, Inc.
14410 West Sylvanfield Dr.
Houston, TX 77014

Dear Mr. Hayden:

We refer to your letter of August 17, 2012, with its enclosure, written on behalf of Waller Marine, Inc. ("Waller"), wherein you have reported that Waller is currently engaged in the design of an un-manned tank barge to carry liquefied natural gas (LNG) for the purpose of bunkering ships using the LNG as fuel. As it is Waller's intention that the barge, when completed, will be documented in the United States and qualified to engage in the coastwise trade of the United States it must, in accordance with 46 U.S.C. § 12112, have been built in the United States.

You have further reported that, though the construction yard has not yet been selected, the barge hull and superstructure will be constructed in the United States and the machinery will be from U.S. manufacturers. However, your inquiry concerns the LNG cargo tanks and whether the foreign manufacture of those tanks, if assembled into the barge in a U.S. shipyard, would render the barge ineligible to engage in the coastwise trade of the United States.

Finally, you have reported that, because of the cryogenic nature of the LNG cargo, the tanks will not be permanently attached to the hull. Rather, they will be restrained in such a way as will permit longitudinal movement of the tank but restrict transverse and vertical movement. Accordingly, your contention is that the tanks will not be an integral part of the barge's hull or superstructure and will not affect the flotation envelope or structural integrity of the hull. As such, the question for which you have sought our determination is whether the barge would be qualified to engage in the coastwise trade of the United States if those tanks are procured from a foreign manufacturer, fabricated in a foreign source, and then assembled into the barge in the U.S. shipyard where it is intended to be constructed.

Your letter was also provided to the Coast Guard's Naval Architecture Division ("NAD") which, at our request, has reviewed your plans and your contention concerning the tanks. A copy of the NAD report, dated September 7, 2012, has been attached hereto as Exhibit A in support of this determination.

Your letter clearly reflects your correct understanding that, in order to be documented in the United States with a coastwise endorsement entitling it to be operated in the coastwise trades of

the United States, the barge must be determined to have been built in the United States. Moreover, in order for that to be the case, its construction must satisfy both of the requirements of 46 C.F.R. § 67.97; namely:

“To be considered built in the United States a vessel must meet both of the following criteria:

- (a) All major components of its hull and superstructure are fabricated in the United States; and
- (b) The vessel is assembled entirely in the United States.”

For the purposes of our determination in this case the definition of the term “hull” at 46 C.F.R. § 67.3 must also be considered, as follows, in pertinent part:

“*Hull* means the shell, or outer casing, and integral structure below the main deck which provide both the flotation envelope and structural integrity of the vessel in its normal operations...”

The question put to the NAD for technical review by the facts presented in this case is straightforward. Would the tanks, as described, form part of the “hull”, as defined above, of the barge? If so, because of their size (you estimated the lightship weight of the barge to be approximately 600 long tons and the unit weight of each tank to be approximately 100 long tons), it is clear that they would constitute “major components” of the hull (the standard for which has consistently been set at 1.5% of the vessel’s lightship steelweight) and, as such, would need to be fabricated in the United States in order for the barge to be considered built in the United States. If not, on the other hand, the fact that they might be fabricated outside of the United States would not negatively implicate the first criterion set forth above.

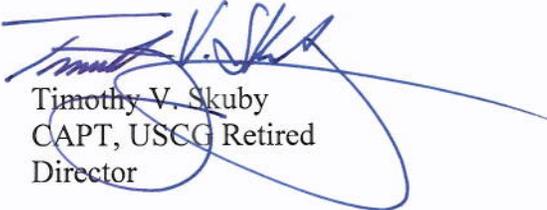
After review, the NAD offered the following findings at paragraphs 4, 5 and 6 of its report, in pertinent part:

“4. The only issue submitted for our consideration here is whether or not the LNG cargo tanks are part of the hull... With respect to cargo tanks, and consistent with our previous reviews of this nature:

- (a) “Independent” cargo tanks (as opposed to “integral” tanks) are structurally separate from the hull. This means that primary hull stresses are not transmitted to the tank structure, and the tank structure is designed only to meet the liquid loads (i.e., hydrostatic and hydrodynamic (sloshing)) and does not contribute to the overall strength of the hull.
5. Based on the description of the cargo tank installation...the LNG tanks will be structurally independent of the hull.
6. Therefore, we conclude that the LNG tanks are not part of the hull...”

Based upon this conclusion, the LNG tanks in this case may be fabricated outside of the United States without negatively impacting the first criterion set forth above for determination that the barge will have been built in the United States. Consequently, provided that the tanks are assembled into the barge in the United States, as we understand to be the plan, and that its construction in all other respects satisfies the test of having been built in the United States, the barge would remain qualified to engage in the coastwise trades of the United States.

Sincerely,



Timothy V. Skuby
CAPT, USCG Retired
Director

EXHIBIT A

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant (CG-ENG-2)
United States Coast Guard

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16713
September 7, 2012

MEMORANDUM

From: Jaideep SIRKAR *Jaideep Sirkar*
Chief, Naval Architecture Division (CG-ENG-2*)

Reply to: CG-ENG-2*
Attn of: (202) 372-1366

To: National Vessel Documentation Center

Subj: **Waller Marine LNG bunker barge – Preliminary U.S. Build Determination**

Refs: (a) D. Cameron (NVDC) e-mail of 17 Aug 2012, to J. Sirkar (CG-ENG-2), forwarding ref (b)
(b) Waller Marine letter (w/attached Gen'l Arrangement drawing) of August 17, 2012, to NVDC

1. Reference (a) requests our review and comments regarding a liquefied natural gas (LNG) barge that will be built in a U.S. shipyard for Waller Marine. Waller Marine intends to outfit the barge with two foreign-built independent LNG cargo tanks, and is requesting an early confirmation of the coastwise eligibility of the vessel.

Description of vessel and foreign-source components

2. As described in reference (b), this will be a 195 ft x 50 ft x 12 ft double-hulled LNG bunker barge, outfitted with two large cylindrical LNG cargo tanks arranged side-by-side inside a trunk enclosure. Forward of the trunk will be a machinery deckhouse, and a control deckhouse will be located on top of the trunk. The light ship weight of the barge is presently estimated to be 600 Ltons.

3. The LNG tank dimensions will be 18 ft diameter by 136 ft in length, of 1,000 m³ capacity each. The empty weight of each LNG tank is estimated at 100 Ltons. The tanks will be foreign-fabricated and delivered to the U.S. for installation onto the barge.

Basis of our review per 46 CFR 67.3

4. The only issue submitted for our consideration here is whether or not the LNG cargo tanks are part of the hull, and should therefore be included in the vessel's discounted steel weight. With respect to cargo tanks, and consistent with our previous reviews of this nature:

- (a) "Independent" cargo tanks (as opposed to "integral" tanks) are structurally separate from the hull. This means that primary hull stresses are not transmitted to the tank structure, and the tank structure is designed only to meet the liquid loads (i.e., hydrostatic and hydrodynamic (sloshing)) and does not contribute to the overall strength of the hull.

Review comments

5. Based on the description of the cargo tank installation in reference (b) and the General Arrangement drawing, the LNG tanks will be structurally independent of the hull.

6. Therefore, we conclude that the LNG tanks are not part of the hull, and that their weight should not be included in the discounted steel weight of the vessel.

7. If you have any questions, please contact me or Mr. Thomas JORDAN at the above.

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*formerly CG-5212