

## Supporting Statement for Self-propelled Liquefied Gas Vessels

### A. Justification

#### 1. Circumstances that make the collection of information necessary:

The Coast Guard is tasked by 46 USC 3703 with the protection of life, property, and the marine environment from the hazards associated with the transport of bulk liquid dangerous cargoes. Title 46 CFR Part 154 accomplishes this task for the transport of liquefied gases in bulk on self-propelled vessels by regulating the design, construction, equipment, personnel safety, and operation of these vessels. There are both reporting and recordkeeping requirements in these regulations. The reporting documentation provides a means for vessel owners or operators to obtain approval to carry liquefied gases in the U.S. waters. This documentation is an integral part of the Coast Guard's administration of the Commercial Vessel Safety Program, specifically, the Certificate of Inspection program for U.S. flag vessels and the Certificate of Compliance program for foreign flag vessels.

The recordkeeping requirements of Part 154 are intended to ensure that vessel personnel are alerted to those safety issues regulated and controlled by operational standards rather than by design standards. A thorough review of the posting and recordkeeping requirements contained in these regulations found that they are considered to be necessary for safe operation and maintenance of the vessel and they are not an unreasonable burden. Parts of these requirements are routinely performed by the vessel operators in the course of good business practice. However, since it cannot be assured that every vessel will operate under good business practices, these requirements will remain part of the regulations for self-propelled liquefied gas vessels.

This information collection supports the following strategic goals:

#### Department of Homeland Security

- Prevention
- Protection

#### Coast Guard

- Marine Safety
- Maritime Stewardship

#### Prevention Directorate (CG-3P)

- Safety: Eliminate deaths, injuries, and property damage associated with commercial maritime operations.
- Human and Natural Environment: Eliminate environmental damage associated with maritime transportation and operations on/around the nation's waterways.

#### 2. By whom, how, and for what purpose the information is to be used:

There are 16 reporting and recordkeeping requirements contained in this collection (see Appendix A). The reporting information is used by the Coast Guard in three ways: 1) as a

means to verify compliance with the requirements of Part 154; 2) as a means to communicate specific information on special designs not covered by the regulation; and, 3) to obtain information necessary to schedule a Certificate of Compliance examination. Three of the reporting items: numbers 1, 2 and 5 [Subchapter D Certificate of Inspection, IMO Certificate of Fitness, and SOLAS Certificates] must be maintained on board the vessel. The other records maintained by the vessel operator are not submitted directly to the Coast Guard. They are examined on board the vessel by Coast Guard inspectors and vessel personnel to ensure they meet the requirements. Without this collection of information, the Coast Guard would have no way to determine if a vessel meets U.S. safety requirements for the transport of liquefied gases.

3. Consideration for using of improved information technology:

The information specified above, specifically, the Certificate of Compliance program for foreign flag vessels, takes the form of submissions of vessel plans along with the applications for the Certificate of Compliance. They are typically sent to the Coast Guard Marine Safety Center (MSC) by fax or U.S. Postal Service mail delivery because of the complexity of the documents included. However, if the company wants to provide the same information electronically, a request via e-mail is acceptable. The information may be e-mailed to the MSC at the following link [msc@uscg.mil](mailto:msc@uscg.mil). Amplifying information on this capability may be found at the MSC pages on the Coast Guard's "Homeport" internet portal, at the following link: <http://homeport.uscg.mil/mycg/portal/ep/home.do>. The MSC estimates that no materials for this collection are received via electronic format at this time; however, the MSC encourages all owners and operators to submit materials electronically in order to save time and minimize costs.

4. Efforts to identify duplication, and why similar information cannot be used:

No similar reporting or recordkeeping data is collected by any other Federal agency. There is no duplication of efforts as no other state, local or Federal agencies have similar programs. Similar information cannot be used. The reporting information is vessel specific and in most cases is not relevant to other vessels. Similarly, the recordkeeping requirements are not relevant to other vessels since they are: 1) vessel specific operational standards; 2) log entries of personnel safety equipment inspection and equipment setting changes; and, 3) documentation that the vessel meets internationally agreed upon standards for the transport of liquefied gases.

5. Methods to minimize the burden to small businesses if involved:

There are no small businesses in the liquefied gas shipping industry subject to the regulations in Part 154.

6. Consequences to the Federal program if the collection was conducted less frequently:

Less frequent collection of information would not allow the Coast Guard to determine if liquefied gas vessels meet approved construction standards and operating procedures. Without these determinations, there may be increased possibilities for casualties due to the hazards associated with the carriage of liquid bulk dangerous cargoes.

7. Explain any special circumstances that would cause the information collection to be conducted in a manner inconsistent with guidelines:

Information is collected in a manner that is consistent with the guidelines.

8. Consultation:

A 60 day Notice was published in the Federal Register to obtain public comment on this collection. (See [USCG-2007-0045], November 15, 2007 72 FR 64233) The USCG has not received any comments on this information collection.

9. Explain any decision to provide any payment or gift to respondents:

No payments or gifts of any kind are provided to respondents.

10. Describe any assurance of confidentiality provided to respondents:

All information collected complies with the Freedom of Information Act (FOIA), the Privacy Act, and OMB Circular A-108. If a manufacturer or owner considers certain information proprietary, the Coast Guard will maintain confidentiality. Confidentiality is promised, when requested, for information exempt from the mandatory public disclosure requirements of FOIA, or when the information is a trade secret.

11. Additional justification for any questions of a sensitive nature:

No information of a sensitive nature is required in this collection process. The information to be submitted or maintained deals with vessel design or operation and is neither private nor sensitive. Should owners or designers consider certain information proprietary, the Coast Guard recognizes their requests and maintains confidentiality.

12. Estimates of reporting and recordkeeping burden and cost<sup>1</sup> of the collection of information:

- The estimated annual number of respondents is 217.<sup>2</sup>
- The estimated annual hour burden is 6,566 hours.
- The estimated annual cost burden is \$512,132.

This collection of information will affect 217 foreign flag vessels and 0 U.S. flag vessels. The numbers includes both active status and unspecified status gas carriers in order to give the largest possible COC (foreign flag) and COI/COF (U.S. flag) participatory population. No inactive vessels are included. The estimated number of annual respondents was obtained through the U.S. Coast Guard's Marine Safety and Law Enforcement Information System (MISLE) by using the Mission Analysis and Reporting System (MARS Cubes) to retrieve the estimate.

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<sup>1</sup> Labor costs are from the U.S. Coast Guard's "Standard Rates" for "out of government personnel" as detailed in the Commandant's Instructions, COMDTINST 7310.1K.

<sup>2</sup> The estimated number of total annual respondents was obtained through the U.S. Coast Guard's Marine Safety and Law Enforcement Information System (MISLE) by using Mission Analysis and Reporting System (MARS Cubes).

The burden items for this collection of information are divided into two types for analytical purposes: recordkeeping and reporting burdens. This collection of information has 16 possible recordkeeping and paperwork burden items, however, not all of them have a real or significant burden. Appendix A presents a description of each recordkeeping and paperwork burden item. The analysis of the burden and cost estimate for this collection of information is presented in Appendix B.

Items 1, 2 and 5, have both a reporting and recordkeeping responsibility, but the recordkeeping burden is negligible and, therefore, these items were not included in the Appendices as recordkeeping items. Item number 6 involves liquefied gas vessels that occasionally submit a request for the carriage of a gas not included in Table 4 of Part 154. This item uses Coast Guard form CG-4355 for reporting technical information on a liquefied gas that is not described under Part 154. This form, however, is approved under OMB collection 1625-0007 (formerly 2115-0016).

Other recordkeeping items, except for items 12-16, entail only filing or posting a document. These burdens, at mere seconds per year, are considered to be negligible.

The total annual hour burden for reporting and recordkeeping is 6,566 hours and the corresponding annual cost for the respondents' reporting and recordkeeping burden is \$512,132. The total annual cost to respondents is based upon a \$78 hourly "out of government" rate (wage) for O-3 military personnel as detailed in the COMDTINST 7310.1K.

### 13. Estimates of annualized capital and start-up costs:

There are no annualized capital and start-up costs. The information is kept in files, and is a negligible percentage of the files that are typically kept on a ship. The information may be submitted using traditional techniques, such as sending material through the U.S. Postal Service, which will not involve additional costs to perform the requirements of the collection of information.

### 14. Estimates of annualized Federal Government costs<sup>3</sup>:

- The estimated annual hour burden is 678 hours.
- The estimated annual cost burden is \$42,042.

The burden and cost to the Federal government are incurred during the review of certain applications and programs associated with the items for this collection of information. Recordkeeping information in items 9 through 16 are not reported to the Coast Guard, hence there is no cost to the Federal government. Item 9, however, is issued by the Coast Guard and therefore has an associated processing cost. Appendix C gives the burden hours and costs to the Federal government for reporting items 1 through 8, and recordkeeping item 9.

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<sup>3</sup> Labor costs are from the U.S. Coast Guard's "Standard Rates" for "in government" personnel as detailed in the Commandant's Instructions, COMDTINST 7310.1K.

The estimated annual hour burden to the Federal government for reporting and recordkeeping is 678 hours and the corresponding estimated annual cost is \$42,042. The annual cost to the Federal government is based upon a \$62 hourly “in government” rate (wage) for O-3 military personnel as detailed in the COMDTINST 7310.1K.

15. Explain the reasons for the change in burden:

The change (i.e., increase) in hour burden is an ADJUSTMENT and is primarily due to a change in the vessel population combined with an increase in the number of vessel arrivals. The methodology for estimating hour burden per respondent per year remains unchanged.

The change in the number of responses is primarily due to a change in the vessel population combined with an increase in the number of vessel arrivals. The methodology for estimating responses per year remains unchanged.

16. For collections of information whose results are planned to be published for statistical use, outline plans for tabulation, statistical analysis, and publication:

There is no plan to use statistical analysis or to publish this information.

17. Explain the reasons for seeking not to display the expiration date for OMB approval of the collection of information:

We are not seeking such approval. The OMB Number will appear on appropriate PRA disclosure information.

18. Explain each exception to the certification statement:

There are no exceptions to the certification statement.

**B. Collection of Information Employing Statistical Methods**

This information collection does not employ statistical methods.

## **Appendix A. Description of Each Paperwork Burden Item**

### Item 1. Subchapter D Certificate of Inspection

CFR Cite: 46 CFR 154.15, 154.1801 and 154.1804

Plans and calculations must be submitted to the Coast Guard as a prerequisite for an endorsement of a U.S. flag vessel's Subchapter D Certificate of Inspection (COI). A copy of the COI must be maintained on board the vessel. The COI is valid for a period of two years. This paperwork burden constitutes both a reporting and recordkeeping burden on the public. The reporting burden applies only to new U.S. flag liquefied gas vessels. The recordkeeping burden applies to both new and existing U.S. flag liquefied gas vessels. U.S. flag liquefied gas vessels are also required to hold a valid Certificate of Fitness (COF) as a prerequisite for both an initial and a renewal COI. The COF is issued to U.S. flag gas carrier vessels by Coast Guard, and uses form CG-5148, which is approved under OMB collection 1625-0094. Note: there have been no new U.S. gas carrier vessels in the past several years.

### Item 2. IMO Certificate of Fitness

CFR Cite: 46 CFR 154.22(a)(1) and 154.1802(a)

The IMO Certificate of Fitness (COF) is prepared by a vessel's flag administration or its representative. A valid document indicates a new vessel is in compliance with the IMO Gas Code, Resolution A.328(IX), or an existing vessel is in compliance with the IMO Existing Gas Code, Resolution A.329. Generally, an IMO COF is sufficient evidence that a new or existing foreign flag vessel meets Part 154. Foreign flag vessels are required to obtain and submit to the Coast Guard a valid COF as a prerequisite for issuance of a Certificate of Compliance (COC). A copy of the valid COF must be maintained on board the vessel. The COF is valid for a period of five years from the date of issuance. Renewed COFs must be submitted to the Coast Guard when issued. This paperwork burden applies to both new and existing foreign flag liquefied gas vessels. This paperwork burden item constitutes both a reporting and a recordkeeping burden on the public.

### Item 3. Vessel Plans

CFR Cite: 46 CFR 154.22(a)(2)-(7)

The Coast Guard requires that copies of six vessel plans be submitted. These plans detail the general arrangement, piping, firefighting, and safety aspects of the vessel. The Coast Guard reviews but does not approve the plans. The Coast Guard uses them for reference during vessel inspections by Coast Guard personnel. These plans are a permanent record of the vessel's design and are a prerequisite for initial COC issuance. This paperwork burden item applies to both new and existing foreign flag liquefied gas vessels.

### Item 4. Classification Society Certification

CFR Cite: 46 CFR 154.22(a)(9)(i)

Classification society certification of hull steel selection and cargo containment pressure/temperature control must be submitted to the Coast Guard for COC issuance. In this way the Coast Guard ensures that the requirements of Part 154, which exceed IMO Gas Code standards, are met. These documents accompany the vessel's IMO COF. They are prepared and submitted once, during initial certification of the vessel. This paperwork burden item only applies to new foreign flag liquefied gas vessels.

Item 5. SOLAS Certificates

CFR Cite: 46 CFR 154.22(a)(9)(ii) and 154.1802(c)(1)

The Coast Guard requires new foreign flag vessels to submit copies of the vessel's Cargo Ship Safety Construction Certificate and Cargo Ship Safety Equipment Certificate issued under the International Convention of Safety of Life at Sea, 1960. These documents are prepared by the vessels' flag administrations or their representatives, and are indications that certain minimum international safety and construction standards are met. Submission of these documents is also a prerequisite for COC issuance. Copies of valid SOLAS Certificates must be on board the vessels. The 154.1802(c)(1) paperwork burden item constitutes both a reporting and recordkeeping burden on the public. The reporting burden applies only to new foreign flag gas vessels. The recordkeeping burden applies to both new and existing foreign flag liquefied gas vessels.

Item 6. Liquefied Gases Not Described in Part 154

CFR Cite: 46 CFR 154.30(b)

A Coast Guard form 4355 is used for transmitting to the Coast Guard technical information on a liquefied gas that is not described under Part 154. It is prepared when the carriage of a liquefied gas not included in Part 154 is desired. This paperwork burden item applied to both new and existing liquefied gas vessels.

Item 7. Equivalents

CFR Cite: 46 CFR 154.32(b) and 154.34

Applications for equivalency are submitted to the Coast Guard to request use of equipment of fittings that do not meet the requirements of Part 154. Ship owners or operators may make such requests because they believe the substituted equipment or fitting provides the same level of safety of those meeting the requirements of Part 154. This section allows for technical improvements or substitutions without frequent regulatory revisions. This paperwork burden applies to both new and existing liquefied gas vessels.

Item 8. Request for Certificate of Compliance Examination

CFR Cite: 46 CFR 154.151(b) and (c)

The request for COC Examination is submitted to the Coast Guard following completion of the vessel plan review. Certain information is required to be included in the request in order that the Coast Guard can schedule an exam in a U.S. port. A satisfactory exam is a prerequisite for issuance of a COC. This paperwork burden item applies to both new and existing foreign flag liquefied gas vessels.

Item 9. Certificate of Compliance

CFR Cite: 46 CFR 154.1802(a) and (b)

The COC is prepared by the U.S. Government. It is issued to a foreign flag liquefied gas ship if it is in compliance with the requirements of 46 CFR part 154. A copy of the COC must be on board the vessel. The COC is valid for a period of two years from the date of issuance. This paperwork burden item applies to both new and existing foreign flag liquefied gas vessels.

Item 10. Loading and Stability Manual

**CFR Cite: 46 CFR 154.1809**

This manual is prepared during the vessel design and initial certification phases. It is necessary to ensure that the vessel is loaded, off-loaded and ballasted safely and to ensure that the required stability is maintained. Generally, only one is prepared during the vessel's lifetime. It is retained on board the vessel. This paperwork burden item applies to both new and existing liquefied gas vessels.

**Item 11. Cargo Manual**

**CFR Cite: 46 CFR 154.1810**

This manual is prepared during the vessel design and initial certification phases. It is necessary to ensure that all cargo operations are done safely. Generally, it includes: 1) a description of the cargo's properties, hazards and first aid measures, 2) procedures for conducting each cargo handling operation, and 3) maintenance of all safety systems. Generally, only one is prepared during the vessel's lifetime. It is retained on board the vessel. This paperwork burden item applies to both new and existing liquefied gas vessels.

**Item 12. Cargo Location Plan**

**CFR Cite: 46 CFR 154.1816**

As needed, a plan detailing the cargo loading scheme must be prepared. It must include the location and number of each tank and the cargo contained in it. The plan is retained on board the vessel and must be available to ship and Coast Guard personnel. It is very important during an emergency. This paperwork burden item applies to both new and existing liquefied gas vessels.

**Item 13. Shipping Document**

**CFR Cite: 46 CFR 154.1820**

Each loading, this shipping document must be prepared. This document contains the history of the cargo, i.e., shipper, loading terminal, quantity loaded, etc. The document is kept on board the vessel. It is very useful during an emergency and accident investigation. This paperwork burden item applies to both new and existing liquefied gas vessels.

**Item 14. Safety Relief Valve – Changing Set Pressure**

**CFR Cite: 46 CFR 154.1846**

A log entry must be made when the safety relief valve (SRV) set pressure is changed. This ensures that ship and boarding personnel are aware of the SRV setting. The SRV setting determines the quantity of liquid cargo that may be safely loaded into a tank. This paperwork burden item applies to both new and existing liquefied gas vessels.

**Item 15. Air Breathing Equipment**

**CFR Cite: 46 CFR 154.1852**

A log entry must be made after each inspection of the compressed air breathing equipment. The entry gives the date of inspection and condition of the equipment. The equipment must be tested each month. The equipment may be needed for safe containment system entry and escape. This paperwork burden applies to both new and existing liquefied gas vessels.

**Item 16. Speed Reduction Placard**

**CFR Cite: 46 CFR Part 154.1862**



The placard is prepared during the vessel's initial certification phase. It is posed in the wheelhouse. The placard identifies the limiting speed used in the dynamic load analysis calculations. This paperwork burden applies to both new and existing liquefied gas vessels.

## Appendix B. Annual Respondent Reporting and Recordkeeping Burden.

Item Number	Number of Respondents per Year	Number of Responses per Respondent	Burden Hours per Response	Total Annual Response	Total Annual Burden in Hours	Total Annual Burden in Dollars (@\$78/hr)
<b>REPORTING BURDEN</b>						
1	0 <sup>a</sup>	1	100	0	0	\$ -
2	56.4 <sup>b</sup>	1	0.5	56.4	28.2	\$2,200
3	13 <sup>c</sup>	1	0.5	13	6.5	\$507
4	13 <sup>c</sup>	1	0.5	13	6.5	\$507
5	13 <sup>c</sup>	1	0.25	13	3.3	\$257
7	2 <sup>d</sup>	1	20	2	40	\$3,120
8	121.5 <sup>e</sup>	1	2	121.5	243	\$18,954
Total reporting:				218.9	327.5	\$25,545
<b>RECORDKEEPING BURDEN</b>						
12	1,570 <sup>f</sup>	1	1	1,570	1,570	\$122,460
13	1,570 <sup>f</sup>	1	2	1,570	3,140	\$244,920
14	1,570 <sup>f</sup>	0.25 <sup>g</sup>	0.5	392.5	196.3	\$15,311
15	217 <sup>h</sup>	12 <sup>i</sup>	0.5	2,604	1,302	\$101,556
16	60 <sup>c</sup>	1	0.5	60	30	\$2,340
Total recordkeeping:				6,196.5	6,238.3	\$486,587
Total reporting and recordkeeping:				6,415.4 <sup>j</sup>	6,565.8 <sup>j</sup>	\$512,132 <sup>j</sup>

### Notes:

<sup>a</sup> There have been no new U.S. gas carriers in the past several years.

<sup>b</sup> IMO COF submitted at renewal and for new vessels:  $(217 \div 5) + 13 = 56.4$

<sup>c</sup> Documents submitted once during initial certification of the vessel: we estimate 13 initial (new) requests per year.

<sup>d</sup> Liquefied gas vessels occasionally submit a request for special approval, reporting item 7. For the purposes of this analysis, we have assumed 2 requests per year.

<sup>e</sup> Requests required biennially for 217 current gas carriers and 13 new requests per year:  $(217 \div 2) + 13 = 121.5$ .

<sup>f</sup> Based on 1,570 gas carrier vessel arrivals in U.S.

<sup>g</sup> Reset every 4 loadings.

<sup>h</sup> The estimated annual number of respondents is 217.

<sup>i</sup> Monthly inspection during one calendar year.

<sup>j</sup> The grand total numbers are rounded.

## Appendix C. Annual Cost to the Federal Government

Item Number	Burden Hours per Response	Responses per Year	Total Annual Burden in Hours	Total Annual Burden in Dollars (@\$62/hr)
1	900	0 <sup>a</sup>	0	\$ -
2	4	56.4 <sup>b</sup>	225.6	\$13,387
3	2	13 <sup>c</sup>	26	\$1,612
4	2	13 <sup>c</sup>	26	\$1,612
5	1	13 <sup>c</sup>	13	\$806
7	5	2 <sup>d</sup>	10	\$620
8	3	121.5 <sup>e</sup>	364.5	\$22,599
9	1	13 <sup>c</sup>	13	\$806
Total:			678.1 <sup>f</sup>	\$42,042 <sup>f</sup>

### Notes:

<sup>a</sup> There have been no new U.S. gas carriers in the past several years.

<sup>b</sup> IMO COF submitted at renewal and for new vessels:  $(217 \div 5) + 13 = 56.4$ .

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