# Supporting Statement
# for
# Periodic Gauging and Engineering Analyses for Certain Tank Vessels Over 30 Years Old

## A. Justification

1. Circumstances which make the collection of information necessary.

Section 4109 of the Oil Pollution Act (Pub. L. 101-380) requires the issuance of regulations related to the structural integrity of all tank vessels "constructed or adapted to carry, or that carry, oil in bulk as cargo or cargo residue." The current regulations – found in 46 CFR 31.10-21a and 46 CFR Subpart 32.59 – establish minimum standards for plating thickness and require periodic gauging of the plating thickness of tank vessels over 30 years old. Gauging reports (survey data and associated engineering analysis) are to be submitted to comply with this collection of information. The Coast Guard will need these reports as part of the recertification inspection for the affected tank vessels.

This information collection supports the following strategic goals:

Department of Homeland Security
- Prevention

Coast Guard
- Protection of the Natural Resources

Marine Safety, Security and Stewardship Directorate (CG-5)
- Reduce the amount of oil discharged into the marine environment

2. Purpose of the information collection.

The gauging report is utilized by the Coast Guard to verify the structural integrity of an older tank vessel before reissuing its Certificate of Inspection (COI).

3. Considerations of the Information Technology to reduce burden.

Local subcontractors using appropriate equipment will typically perform the gauging surveys. Basic engineering calculations can be accomplished on-site (shipyard) in real time, using a laptop computer and spreadsheet-type software. The gauging report is currently submitted primarily in written form. However, the Coast Guard Marine Safety Center has a Web site[1] that includes the procedures for submitting vessel information electronically.

We estimate that 100% of the reporting requirements can be done electronically. At this time, we estimate that approximately 5% of the responses are collected electronically.

4. Efforts to identify duplication.

The collected information is expected mainly from owners/operators of domestic-service tank barges on inland waterways. There are no other agencies (Federal, state or private) that collect this information on these vessels. The collected information is vessel-specific. Because of the wide

[1] Located at -- http://homeport.uscg.mil , select Missions >> Electronic Commerce.

variations in material condition from vessel to vessel, even similar vessels will not provide suitable data.

However, classification societies already require gauging data from their classed vessel customers, and perform the engineering analyses themselves. Oceangoing tank vessels undergo similar structural evaluations as requisite for receiving an international load line assignment. The Coast Guard will accept ABS classification or an international load line certificate as satisfactory evidence of structural integrity and regulatory compliance. Tankships, which fall into this category, will thus have either ABS certification or load line certification that can be used by the Coast Guard and will not have to duplicate the paperwork.

5. Methods used to minimize the burdens to small business.

This information collection does not have an impact on small businesses or other small entities.

6. Consequences to the Federal program if collection were not done or conducted less frequently.

The collected information is not required until a tank vessel is 30 years old and then only once every five (5) years thereafter. This is considered the longest interval that can be tolerated in order to detect corrosion-induced weakening of the vessel before its structural integrity is compromised.

If this information is not submitted, there are several consequences:

- Without the gauging report, evaluating the structural integrity of a vessel will have to be accomplished visually during hull examinations by USCG marine inspectors; the level of accuracy and degree of confidence of visual evaluation is much less than for gauging and engineering analysis. Accordingly, the Coast Guard will have to be extremely conservative and may not renew a vessel's COI if the inspector judges that its structural integrity might be substandard;

- Without the collected information, the Coast Guard will not be able to verify compliance with the regulations, resulting in uneven compliance by industry. This will put more-responsible owners/operators at a competitive disadvantage against less-responsible ones who do not expend the same funds on maintenance of their vessels; and

- Uneven compliance will also undermine the anti-pollution effectiveness of the regulations in protecting the environment.

7. Special circumstances that require collection to be conducted in an inconsistent manner.

The collected information is conducted in a manner consistent with the guidelines in 5 CFR 1320.5(d) (2).

8. Consultation.

A 60 day (See [USCG-2008-1240], February 4, 2009, 74 FR 6044) and 30-day (See [USCG-2008-1240], April 27, 2009, 74 FR 19100) Notice were published in the Federal Register to obtain public comment on these collections. The USCG has not received any comments on these information collections.

9. Decision to provide payment or gift to respondents.

There is no offer of monetary or material value for this information collection.

10. Assurance of confidentiality provided.

There are no assurances of confidentiality provided to the respondents for this information collection.

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

There are no questions of sensitive language.

12. Estimates of information collection burden.

The U.S. domestic population of tank vessels (barges and ships) older than 30 years is approximately 856[2]. Tankships will probably have either ABS certification or load line certification that also requires gauging reports and engineering analyses. The Coast Guard accepts ABS certification and load line certification as evidence of compliance with the requirement here. However, we consider the entire population as eligible for this collection of information as the number of tankships is small. Thus, the number of gauging surveys and analyses conducted **annually (respondents/responses) is 171** (or 856/5), as they are required once every 5 years.

Each gauging survey will require the following:

- The survey itself will require approximately 16 hours, by a subcontractor technician;
- Reverse-engineering of midship section drawing, analysis of the gauging data, and report write-up will require approximately 40 hours by a licensed Professional Engineer;
- Review and submittal of the report by the owner/operator will require 1 hour by a manager and 1 hour by a secretary; and
- Non-labor costs to industry (equipment charges, travel, etc.) are estimated to be an additional 36% per survey.

Summary of annual burden hours and costs to industry, based on the average of 171 surveys per year in the period of the extended authorization to collect information are:

[2] The average number of vessels that have attained or will attain an age of 30 years during the three year period of this extension. .

| CATEGORY | -- PER SURVEY -- | | | TOTAL (PER YEAR) | |
|---|---|---|---|---|---|
| | Rate | Hours | Total | Hours | Cost |
| Industry/Technician | $45 | 16 | $720 | 2,736 | $123,120 |
| Industry/Prof. Engineer | $85 | 40 | $3,400 | 6,840 | $581,400 |
| Industry/Manager | $111 | 1 | $111 | 171 | $18,981 |
| Industry/Secretary | $31 | 1 | $31 | 171 | $5,301 |
| Industry/Non-Labor costs | | -- | $2,397 | -- | $409,887 |
| Industry/TOTALS: | | 58 | $6,659 | **9,918** | **$1,138,689** |

Estimated burdens were based upon USCG staff knowledge of the efforts required to perform gauging surveys and analyses, and the age profile of the existing tank barge fleet.

The estimated industry costs of labor per hour are derived from Commandant Instruction 7310.1L. Industry Technicians are assumed to have a rank equivalent to GS-9 with a labor cost of $45 per hour. Industry Professional Engineers are assumed to equate to GS-14 with a labor cost of $85 per hour. Industry Managers are assumed to be costly, and do not equate with any of the categories available. Therefore, they are assumed to have a cost that is 30% higher than a GS-14 hourly rate. Industry Secretaries are assumed to equate to GS-4 with a labor cost of $31 per hour.

The cost per survey would be $6,659. This is the addition of $720 for technician cost ($45 per hour x 16 hours); $3,400 for professional engineer cost ($85 per hour x 40 hours); $111 for manager cost ($111 x 1 hour); $31 for secretary cost ($31 x 1 hour); and an additional $2,397 in non labor costs (equipment charges, travel, etc.). Thus, annually, it would cost the industry $1,138,689 ($6,659 per survey x 171 surveys).

**AVERAGE ANNUAL BURDEN HOURS TO INDUSTRY = 9,918.**

**AVERAGE ANNUAL COST TO INDUSTRY = $ 1,138,689.**

As previously discussed (in item 7), recordkeeping is not considered a burden because the collected information is the type usually and customarily retained by owner/operators for their own business purpose.

13. Estimate of annual cost to the respondent (capital and start-up).

There are no capital, start-up or maintenance costs associated with this information collection.

14. Estimates of annual cost to the Federal Government.

It is estimated that the review and processing of the report by the Coast Guard will require 1 hour by a commander/supervisor, 4 hours by a lieutenant/engineer, and 1 hour by a secretary (GS-04).

Annual costs to the Coast Guard for the 171 surveys are $65,835 as described below:

| CATEGORY | -- PER SURVEY -- | | | TOTAL (PER YEAR) | |
|---|---|---|---|---|---|
| | Rate | Hours | Total | Hours | Cost |
| Government/USCG CDR | $88 | 1 | $88 | 171 | $15,048 |
| Government/USCG LT | $67 | 4 | $268 | 684 | $45,828 |
| Government/USCG Sec. | $29 | 1 | $29 | 171 | $4,959 |
| Government/TOTALS: | | 6 | $385 | **1,026** | **$65,835** |

15. Reasons for change in the burden.

The change in burden is an ADJUSTMENT due to a decrease in the estimated number of plans to be submitted to the CG annually. The principal reason for the decrease is a decline in the number of vessels in operation that are at or above 30 years of age due to the OPA 1990 phase-out schedule of Single Hull vessels and Single hull vessels with Double Bottoms, Double Sides or Double Sides and Bottoms.

16. Plans for tabulation, statistical analysis and publication.

This information collection will not be published for statistical purposes.

17. Approval to not display expiration date.

The Coast Guard will display the expiration date for OMB approval of this information collection.

18. Exception to the certification statement.

The Coast Guard does not request an exception to the certification statement of this information collection.

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

This information collection does not employ statistical methods.