

INFORMATION COLLECTION REQUEST

SUPPORTING STATEMENT

Information Requirements for New Marine Compression Ignition Engines  
At or Above 30 Liters per Cylinder (Renewal)

EPA ICR # 2345.03; OMB Control Number 2060-0641

42 USC 7521 § 206  
42 USC 7521 § 213(d)  
40 CFR Part 1042  
40 CFR Part 1043  
40 CFR Part 1060  
40 CFR Part 1065  
40 CFR Part 1068

Certification and Compliance Division  
Office of Transportation and Air Quality  
Office of Air and Radiation  
U.S. Environmental Protection Agency

## 1. Identification of the Information Collection

### 1(a) Title

New Marine Compression Ignition Engines at or Above 30 Liters per Cylinder (Renewal), EPA ICR Number 2345.03, OMB Number 2060-00641.

### 1(b) Short Characterization

With this supporting statement, EPA requests the revision with a three year extension of an existing ICR. The requirements described in this statement apply to marine compression-ignition ('marine CI') engines above 30 liters per cylinder, also known as 'Category 3' engines. Category 3 engines are used primarily for propulsion power on ocean-going vessels.

Under Title II of the Clean Air Act (42 U.S.C. 7521 et seq.; CAA), EPA is charged with issuing certificates of conformity for engines that comply with applicable emission standards. Such a certificate must be issued before engines may be legally introduced into commerce. Category 3 marine CI engine manufacturers must obtain this certificate by demonstrating compliance with the requirements set forth at 40 CFR Part 1042. If the vessel in which the engine is to be installed will travel outside US waters, the engine manufacturer must also obtain a certificate of conformity under 40 CFR Part 1043, also known as an 'IMO<sup>1</sup> certificate.' By traveling outside of US waters, the vessel and the engine become subject to the 'MARPOL Protocol'<sup>2</sup>, an international treaty to which the United States is a signatory party. 40 CFR Part 1043 implements MARPOL's Annex VI in the United States. In addition, engines installed in vessels fueled with volatile liquid fuels other than diesel may also be subject to evaporative requirements found at 40 CFR Part 1060.

To apply for a certificate of conformity, engine manufacturers are required to submit descriptions of their planned production, including detailed descriptions of emission control systems and test data. This information is organized by "engine family" groups expected to have similar emission characteristics and is submitted every year, at the beginning of the model year. There are also recordkeeping requirements.

The CAA also mandates EPA to verify that manufacturers have successfully translated their certified prototype engines into mass produced engines, and that these engines comply with emission standards throughout their useful lives. Under the Production-line Testing (PLT)

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1 IMO stands for International Maritime organization, a United Nations organization that administers the MARPOL Protocol (see footnote #2 below).

2 MARPOL, or the International Convention for the Prevention of Pollution from Ships, is the main international convention covering prevention of pollution of the marine environment by ships.

[http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-\(MARPOL\).aspx](http://www.imo.org/About/Conventions/ListOfConventions/Pages/International-Convention-for-the-Prevention-of-Pollution-from-Ships-(MARPOL).aspx) .

Program, manufacturers of marine CI Category 3 engines are required to test each engine either at its vessel's sea trial or within the first 300 hours of operation, whichever comes first. To verify that marine CI engines compliance with emission standards throughout their useful lives, EPA may perform in-use testing on any engine.

This information is collected by the Diesel Engine Compliance Center (DECC), Compliance Division (CD), Office of Transportation and Air Quality, Office of Air and Radiation, U.S. Environmental Protection Agency (EPA). Besides DECC, this information could be used by the Office of Enforcement and Compliance Assurance and the Department of Justice for enforcement purposes. Non-confidential portions of the applications are disclosed in EPA's website. This information is used by trade associations, environmental groups, and the public. The information is usually submitted in an electronic format, and it is stored in CD's databases.

It has been estimated that a total of 4 marine CI Category 3 engine manufacturers will annually respond to this collection with an approximate total cost of \$1,931,765.

## **2. Need For and Use of the Collection**

### **2(a) Need/Authority for the Collection**

EPA's emission programs are statutorily mandated; the agency does not have discretion to cease these functions. The data required is necessary to comply with Title II of the Clean Air Act (CAA), as amended in 1990. The Act directs us to adopt emission standards for any category of nonroad engines that contributes to air quality nonattainment in two or more areas in the US. Under Section 206(a) of the CAA (42 USC 7521):

"The Administrator shall test, or require to be tested in such manner as he deems appropriate, any new motor vehicle or new motor vehicle engine submitted by a manufacturer to determine whether such vehicle or engine conforms with the regulations prescribed under §202 of this Act. If such vehicle or engine conforms to such regulations, the Administrator shall issue a certificate of conformity upon such terms, and for such period (not in excess of one year) as he may prescribe."

This provision is extended to Nonroad engines and vehicles pursuant to §213(d) of the CAA. Emissions regulations pertaining to marine CI Category 3 engines are codified at:

- 40 CFR Part 1042 – emission standards and certification requirements
- 40 CFR Part 1043 – requirements for engines and vessels that travel beyond US waters
- 40 CFR Part 1060 – evaporative emission standards and certification requirements
- 40 CFR Part 1065 – exhaust emission test procedures
- 40 CFR Part 1068 – general compliance provisions

Section 206(b)(1) of the CAA authorizes EPA to require testing of new vehicles and engines to verify compliance. The requirements of the Marine CI Production Line Testing Program are codified at and Part 1042, Subpart D. Requirements specific to Category 3 engines are found at 1042.302.

Section 207(b) of the Acts mandates the establishment of methods and testing procedures to ascertain whether certified engines in actual use in fact comply with applicable emission standards throughout their useful lives. For marine CI engines in general, EPA does not require respondents to perform in-use testing. However, the Agency reserves the right to test any engine subject to Part 1042 (40 CFR 1042, Subpart E).

## **2(b) Practical Utility/Users of the Data**

EPA uses the information requested under this collection to verify and support a three stage compliance assurance system envisioned in the CAA. First, certification information is needed to verify that the proper prototype engines have been selected to represent each engine family (group of engines expected to have similar emission characteristics), and that the necessary testing has been performed. Based on this information, EPA issues a certificate of conformity. However, prototypes are often hand-built and not typical of assembly line engines.

Information collected under the PLT program is used to verify that manufacturers have successfully translated their prototypes into mass-produced engines. Engines are taken directly from the assembly line and tested.

Lastly, in-use testing is designed to determine if marine CI engines maintained in accordance with the manufacturer's instructions still emit at acceptable levels after a number of years of actual use. If a family of marine CI engines is found not to comply, manufacturers are required to recall the family.

The information will be received and used by DECC. In instances of noncompliance, the information may be used by EPA's enforcement office and the Department of Justice. Non-confidential portions of the information submitted to DECC are available to and used by importers, environmental groups, members of the public and state and local government organizations.

## **3. Nonduplication, Consultations, and other Collection Criteria**

### **3(a) Nonduplication**

The information requested under this ICR is required by statute. Because of its

specialized nature, and the fact that most of it must be submitted to EPA before marine CI engines can be sold, the information collected is not available from any other source. Furthermore, some of the data requested, such as sales volumes or certain engine designs, may be proprietary in nature, and thus claimed as confidential business information (CBI) by manufacturers. Therefore, EPA can only obtain the information if it is submitted by its owners, the engine manufacturers.

### **3(b) Public Notice Required Prior to ICR Submission to OMB**

An announcement of the public comment period for this ICR renewal was published in the Federal Register (78 FR 29751) on May 21, 2013. This document may be accessed through the Federal Register's website at <http://www.gpo.gov/fdsys/pkg/FR-2013-05-21/pdf/2013-12096.pdf>. No comments were received in response to this ICR renewal.

### **3(c) Consultations**

EPA contacted two of the four past respondents regarding this information collection burden.

Contact: Joseph C. Eves  
Company: Fairbanks Morse Engine  
Beloit, WI  
Phone: (608) 364-8175

Contact: Brian J. Hockridge  
Company: Caterpillar  
Mossville, IL  
Phone: (309) 578-4078

### **3(d) Effects of Less Frequent Collection**

The CAA states that emission certification must be done on a yearly basis (CAA 206(a)(1)), coinciding with the industry's "model year." Major product changes typically occur at the start of a model year. For these reasons, a collection frequency of less than a model year is not possible. However, when an engine design is "carried over" to a subsequent model year, the amount of new information required is substantially reduced.

Production-line testing (PLT) reports must also be submitted on a quarterly basis for similar reasons. Manufacturers are required to test up to one percent of their production at random to ensure that mass produced marine CI engines comply with emission requirements. If a problem is found, manufacturers must correct it and might need to recall engines that have already been sold. By conducting this quality control testing on a quarterly basis, manufacturers

learn about any problems early and are, therefore, able to minimize costs.

### **3(e) General Guidelines**

According to 40 CFR 1042.250 (c) and 1042.350(b), certification and PLT related records must be maintained for eight years. Certain labeling records must be kept for five years (40 CFR 1042.135 (g)). However, respondents may “store these records in any format and on any media, as long as [respondents] can promptly send us organized, written records in English if we ask for them.” These recordkeeping requirements stem mainly from the long periods of time Category 3 engines are expected to be in service and from the statutory requirement to recall engines failing to meet emission standards during their useful lives.

Manufacturers are required to submit confidential business information such as sales projections and certain sensitive technical descriptions (please see Section 4(b)(i) for reference). This information is kept confidential in accordance with the Freedom of Information Act, EPA regulations at 40 CFR Part 2, and class determinations issued by EPA's Office of General Counsel. Also, non-proprietary information submitted by manufacturers is held as confidential until the specific marine CI Class 3 engine to which it pertains is available for purchase.

No other general guideline is exceeded by this information collection.

### **3(f) Confidentiality**

Manufacturers are allowed to assert a claim of confidentiality over information provided to EPA. Confidentiality is provided in accordance with the Freedom of Information Act and EPA regulations at 40 CFR Part 2. For further detail, refer to Section 3(e).

### **3(g) Sensitive Questions**

No sensitive questions are asked in this information collection.

## **4. Respondents and Information Requested**

### **4(a) Respondents/North American Industry Classification System (NAICS) Codes**

Respondents are manufacturers of Nonroad equipment and engines within the following North

American Industry Classification System (NAICS) codes:

- 333618 - Other Engine Equipment Manufacturing;
- 336611 - Manufacturers of Marine Vessels;
- 811310 - Engine Repair and Maintenance;
- 483 - Water transportation, freight and passenger.

#### **4(b) Information Requested**

Sections 1042.925, 1043.70-80 and 1060.825 list the reporting and recordkeeping requirements applicable to Category 3 engines as well as other types of engines regulated under those parts. This section discusses those requirements that apply to Category 3 engines only. Some data items are only required to be kept in records and submitted upon request.

Reporting and recordkeeping requirements vary according to the characteristics of the Category 3 engine and/or the vessel in which the engine is installed. Based on those characteristics, engine or vessel manufacturers may need to obtain between one and three certificates of conformity:

- Exhaust Emissions Certificate under 40 CFR 1042 – all engines sold or installed in vessels that navigate US waters must be covered by a Part 1042 certificate. Must be obtained annually.
- IMO Certificate – demonstrates compliance with international standards, codified for the US at 40 CFR Part 1043. Required for commercial engines/vessels which travel beyond US territorial waters. Must be obtained at least once. Recertification is only necessary if the engine design undergoes changes that affect emissions.
- Evaporative Certificate – required for engines that will be fueled with volatile liquid fuels other than conventional diesel. Must be obtained annually.

It should be noted that marine CI engine manufacturers who are subject to evaporative standards must obtain an evaporative certificate under the requirements for spark-ignition engines found at 40 CFR Part 1045 (1042.107(b)). The burden associated with those requirements is covered under ICR 1695.11, OMB Number 2060-0338. Therefore, that burden has been excluded from this collection request even though we mention some of it here.

EPA has developed electronic tools that respondents use to submit the information requested. Section 4(b)(i) below summarizes the data requested under each program and the tools used to collect it.

#### **(i) Data Items**

#### *(4)(b)(i)(1) Certification*

To obtain a certificate of conformity, manufacturers must describe their products and supply test data to verify compliance. The information is organized by "engine family" groups expected to have similar emission characteristics. The burden associated with certifying a given engine family is usually reduced after the first production year (model year), because certification data and information from previous years can be "carried over" if no significant changes have occurred. A model year (MY) refers to the manufacturers' annual new model production period, or a calendar year if the manufacturer does not have a model year. For instance, an engine family certified in MY 2013 can be certified in MY 2014 by "carrying over" data submitted as part of the 2013 application if no significant emissions-related changes have occurred to the engine family between model years. Manufacturers must also retain records.

Exhaust and evaporative engine families need to be certified each model year (does not apply for IMO certificates). Manufacturers may make changes to one or more engine models within a family at any time during the model year ('running changes'). These running changes may significantly affect the engine models, and therefore, the engine family's emission levels. For this reason, all engine emissions compliance programs run on a model year basis.

Respondents to this collection use EPA form 590-124 to apply for exhaust emissions certificates and IMO certificates, as well as to notify EPA of running changes. The Form is submitted electronically. Applications for evaporative certificates are submitted on-line through VERIFY, EPA's vehicle and engine compliance information system. More information about VERIFY can be found at <http://epa.gov/otaq/verify/index.htm>.

A summary of the data items requested under the Exhaust and IMO Certification Programs are listed below. These data items are collected under:

- Exhaust emissions certification applications – Part 1042, Sections B & C
- IMO certification applications - Part 1043, starting 1043.41 through 1043.80.

#### *Summary of data items:*

- Statement of compliance
- Identification and description of the basic engine design including, but not limited to, the engine family specifications (fuel, cooling medium, etc.)
- Explanation of how the emission control system operates
- Fuel System Type and Components
- Useful Life Period
- Deterioration Factors
- Intended Service Fuel
- Projected Sales
- Estimated Production Period



- Sales Area
- Plant Contact and Location
- Program Information
- Nonroad Engine Equipment Types
- Detailed description and justification of each auxiliary emission control device (AECD), and how they affect emissions
- Description of all adjustable parameters, their adjustable ranges and methods employed to prevent tampering, etc.
- Detailed drawings and descriptions of the various emissions-related components
- Description of the test equipment and fuel to be used
- Description of the test procedures to be used to establish the durability data or the exhaust emission deterioration factors
- All test data obtained by the manufacturer on each test engine.
  - The regulations provide alternative methods for certain types of Category 3 engines to demonstrate compliance. For examples, see 1042.655 & 1042.670.
- Statement of the useful life
- Statement of the alternative useful-life period and a brief synopsis of the justification, if applicable
- Maintenance information
- Description of the provisions taken to prevent tampering with emission control computer instructions
- Proposed test fleet selection and the rationale for the test fleet selection
- Special or alternate test procedures, if applicable
- Period of operation necessary to accumulate service hours on test engines and stabilize emission levels
- Manufacturers may request in writing special procedures in advance of certification or along with their application certification
- For branded engines, the company whose trademark the applicant will use. (1042.640(2)(b))
- If the respondent modifies its own engines for use on a vessel, it must notify us in the certification application (1042.605(g)(1))

Engine manufacturers must label all engines. For engines certified under Part 1042, the label must identify each engine and state the engine family name, the fuels the engine is certified to run on, the engine useful life and category, if applicable (1042.135). Other language applies if the engine is being certified under a special provision or exempted under any of the programs discussed here. Under certain circumstances, the vessel must also be labeled. Manufacturers are also required to provide warranties and owner's manuals to consumers.

An application fee must be paid per engine family per model year. This fee, which is recalculated every year, is requested under the authority of Section 217 of the CAA and the Independent Offices Appropriation Act (31 U.S.C. 9701) to ensure that the motor vehicle emissions compliance program is self-sustaining to the extent possible. Fees are collected electronically at [www.pay.gov](http://www.pay.gov) or by mail using the Nonroad Fee Filing Form, Form 3520-29.

The fee filing form is covered under ICR 2080.05, OMB Control Number 2060-0545. Additional information is available at <http://www.epa.gov/otaq/fees.htm> and in section 6(b)(ii) of this supporting statement.

From time to time, EPA may conduct confirmatory testing. When there is reason to believe that a compliance issue may exist with the emissions data submitted at certification, EPA may, at its own expense, purchase or rent engines and test them. Manufacturers may be notified about this testing in advance and may be required to explain discrepancies found between EPA test data and that submitted by the manufacturer.

Manufacturers may request a hearing on the EPA's denial or revocation of a certificate of conformity within 30 days of the EPA's decision. The request must be in writing, include a description of the manufacturer's objections and data to support the objections (1042.920). Hearings will be conducted using the procedures specified in 40 CFR Part 1068, Subpart G.

#### *Certification Recordkeeping:*

Manufacturers must keep records for eight years except routine emission records, which must be kept for only one year. Engine manufacturers must also keep records regarding replacement or duplicate labels for five years (1042.135(g)).

- General Records:
  - Identification and description of all engines for which testing is required;
  - Description of emission control systems; and
  - Description of test procedures.
- Individual Records:
  - Copies of all the applications submitted;
  - A brief history of all test engines and running changes;
  - A complete record of all emission tests performed;
  - The emission-data engine's construction, origin and buildup;
  - The date of each mileage accumulation run and the mileage accumulated;
  - Record and description of all maintenance and other servicing performed;
  - Record and description of each test performed to diagnose engine or emission control system performance;
  - A brief description of any significant events affecting the engine;
  - Production volumes for each engine family by assembly plant;
  - Data from routine emissions tests; and
  - Engine identification numbers.

#### *(4)(b)(i)(2) Production Reports*

Each manufacturer is required to submit an Annual Production Report identifying the number of engines produced by engine family, including engines not reported under PLT (see section (i)(3) below). EPA has developed an Excel-based form for Annual Production Reports. Form 5900-90 is submitted electronically via VERIFY. The data is then electronically uploaded into the Compliance Database.

#### *(4)(b)(i)(3) Production-Line Testing (PLT)*

Information requested under the PLT testing program consists mainly of test results, a description of the engines tested and the conditions under which the tests took place. This information is essential to determine if production Category 3 engines are in fact complying with emission standards. Whereas the certification test information indicates whether a specific engine prototype is capable of meeting emission standards, PLT data is used to determine if mass-produced engines also comply.

Under Part 1042, each Category 3 engines must be tested either at its vessel's sea trial or within the first 300 hours of operation, whichever comes first. This is due to the low volume of Category 3 engine families. To date, all engine families except one had projected production of between one and four engines. Therefore, all engines produced must pass PLT testing. If an engine fails due to defective components or design deficiencies, EPA may revoke or suspend that engine family's certificate (1042.302(a)). Manufacturers may request alternative testing methods for PLT under 1042.302(e). Testing is only required for NO<sub>x</sub> emissions, as opposed to certification which requires HC, PM and NO<sub>x</sub> emissions testing. Alternative testing methods may be requested under 1042.302(e).

PLT testing is conducted quarterly, and respondents must report their PLT results within 45 days after the end of each quarter. Category 3 PLT Reports will be submitted electronically, via VERIFY, using Form 5900-297 (CumSum) or Form 5900-298 (non-CumSum). Records must be kept for 8 years (1042.350(b)). There are no PLT requirements for IMO engines.

Evaporative families are subject to Product Verification under Part 1060, Subpart D. Manufacturers are required to use good engineering judgement to verify compliance. This may include testing. While there are no reporting requirements, manufacturers must make the information available (1060.301(b)) and provide samples for testing (1060.310) upon request from EPA.

#### *(4)(b)(i)(4) In-use Testing*

The In-use Program seeks to verify that engines comply with emission standards throughout their useful lives, as mandated in the CAA. There is no specific requirement for manufacturers to conduct in-use testing, submit information or keep in-use records. However, EPA may perform in-use testing on any marine CI engine (Part 1042, Subpart E; Part 1060,

Subpart E) or evaporative family (Part 1060, Subpart E).

#### *(4)(b)(i)(5) Defects*

Part 1068, Subpart F describes the procedures a manufacturer must follow when an emissions-related defect is discovered in a certain number of engines. ICR 282.15, OMB 2060-0048, describes and accounts for the burden associated with all marine CI engines.

#### *(4)(b)(i)(6) Special Compliance Provisions*

Additional reporting, labeling and recordkeeping requirements apply when a certified engine is rebuilt or replaced, when a manufacturer elects to use engines originally certified to other standards, or when the manufacturer wishes to apply for certain exemptions (See Part 1042, Subpart G).

Manufacturers who wish to “dress” or “marinize” a land-based engine for use as a propulsion engine on a vessel must label the marinized engine (1042.605(e)). If an original engine manufacturer marinizes its own engines, it must notify EPA in the certification application (1042.605(g)(1)). An original engine manufacturer may be required to submit emissions data on engines marinized by someone else (1042.605(g)(2)).

Under unusual circumstances, a Category 3 engine manufacturer may ask EPA to allow the use of a replacement engine under 1042.615. Since Category 3 engines are expected to be rebuilt to current standards every few years, it is unusual to need a replacement engine. A replacement engine is a newly manufactured engine that complies with the standards in effect at the time the engine being replaced was built. A replacement engine may only be used if the engine manufacturer determines that no engine certified to current standards, regardless of who manufactures it, is suitable to repower the vessel. Manufacturers who build replacement engines must notify EPA, keep records and label the engines accordingly.

EPA regulations afford Category 3 engine manufacturers the opportunity to exempt their products when the engines are to be used in certain circumstances, such as:

- National Security Exemptions (NSEs, 1042.635) – Agencies of the US Federal Government related to national defense may exempt engines without request if the engines are used in armored and/or specialized vessels. Engine manufacturers may request a NSE if it is endorsed by a defense-related Federal Agency.
- Testing Exemptions for engines to be used in research, investigations, demonstrations or training (1068.210)
- Engines used for display only (1068.220)

Engines exempted under any of these provisions must not be made available for sale in the US. To request an exemption, manufacturers submit a letter explaining why they need the exemption and, upon approval, must label the exempted engines accordingly.

#### *(4)(b)(i)(7) Selective Enforcement Auditing (SEAs)*

While EPA performs SEAs sparingly, all Category 3 engine manufacturers are potentially subject to audits (Part 1068, Subpart E). EPA collects the information needed for SEAs in two stages. First, a limited number of manufacturers are asked to submit their production plans for a specified period of time, as described below. EPA uses this "pre-audit" information to efficiently determine which manufacturers and engine models to audit. After a manufacturer has been selected, EPA issues a test order specifying which engine models and configurations will be tested. When all required testing is completed, manufacturers submit a report containing all testing results within 30 days of each audit (1068.450(a)). This "audit" information is then used to determine compliance with applicable emission standards.

Paper records must be kept for one year after all ordered tests have been completed (1068.455(a)). For additional storage, any media can be used. EPA may review manufacturer records at any time.

#### *(4)(b)(i)(8) Requirements for Vessel Owners, Operators & Rebuilders*

Section 1042.660 establishes reporting and recordkeeping requirements for owners and operators of Category 3 vessels. For vessels equipped with SCR systems which require urea or other reductants, owners and operators inform EPA within 30 days of any operation of the vessel without the appropriate reductant (1042.660(b)). Owners and operators must maintain on board the vessel all certification records as well as records of all maintenance, repairs and adjustments that could reasonably affect emissions. Those records must be made available to EPA upon request and transferred to any subsequent purchaser (1042.660(a)(3)). Operators must also notify the engine manufacturer of any malfunction that occurs during the useful life of the engine, so the manufacturer can investigate and comply with defect reporting requirements. If the malfunction is due to lack of appropriate operation and maintenance, then such notification is not necessary.

Owners and operators of Category 3 vessels must conduct an annual review of each vessel's records and submit to EPA a signed statement indicated whether all requirements were met in the preceding year (1042.660(d)). If there was a malfunction, the statement must include a description of the incident and the steps taken to remedy it.

Manufacturers, owners and operators must allow required emission tests and inspections and must provide reasonable assistance (1042.660(e)).

When an engine undergoes a major overhaul, or is 'rebuilt,' the rebuilder must keep certain records for two years and make them available to EPA if the agency asks for them (1068.120(k)). The records may be kept on an engine family basis, as opposed to a per engine basis, if that is more consistent with the business' practices (1068.120(k)(3)). The records must include (1068.120(j)):

- The number of hours of operation or mileage at the time of rebuild.
- The work done on the engine and/or emissions components
- A description of any engine parameters adjustments
- A list of any emission-related codes or signals that the rebuilder responded to.

**(ii). Respondent Activities**

This section provides a summary of the activities most commonly performed by respondents to this collection.

*(ii)(1) Certification Activities, Annual Production Reports*

- Review the regulations and the guidance document;
- Develop engine family groups;
- Test engines for compliance with emission standards;
- Develop deterioration factors, if applicable;
- Gather emissions data;
- Submit the fee filing form;
- Pay the corresponding fee;
- Submit the Application for Certification;
- Post a bond upon importation, if applicable;
- Prepare and provide owner’s manual (customary business practice);
- Retain and maintain records, and submit them upon Administrator's request
- Gather production data (customary business practice); and
- Submit an annual production report.

*(ii)(2) Production Line Testing Activities*

- Gather/maintain production data (customary business practice);
- Read instructions and regulations;
- Train personnel;
- Project testing needs and plan schedules;
- Select engines to be tested;
- Inspect engines to be tested;
- Contract an independent facility to test engines (if needed);
- Test engines;
- Enter data and analyze it;
- Prepare and submit reports; and
- Keep records.

*(i)(3)Special Compliance Provisions*

- Write a letter explaining the need for an exemption and wait for approval;
- Answer questions, if any; and
- Export or destroy the engine after the exemption period is over.

*(i)(4) Selective Enforcement Auditing (SEAs) Activities*

- Gather/maintain production data (customary business practice);
- Read instructions and regulations;
- Provide pre-audit information;
- Plan activities;
- Train personnel;
- Test engines;
- Enter data and analyze it;
- Prepare and submit reports; and
- Keep records.

*(i)(5) Vessel Owners, Operators and Rebuilders' Activities*

- Keep records of any malfunctions, engine repairs and/or rebuilds, as applicable (customary business practice);
- Pass records to subsequent owners (customary business practice)
- Owners & Operators:
  - Inform EPA of any operation without sufficient reductants, if applicable;
  - Inform the engine manufacturer or any malfunction of emissions components not due to improper maintenance;
  - Perform annual records review and submit report
- Make records available to EPA upon request.

**5. The Information Collected--Agency Activities, Collection Methodology, and Information Management**

**5 (a) Agency Activities**

*(a)(1) Agency Certification Activities*

- Review and interpret regulations, provide guidance;
- Gather applications from the industry, enter data into the database;
- Review the applications for completeness and accuracy;
- Verify that the correct engines have been selected and tested;
- Answer questions from manufacturers and the public;
- Issue appropriate certificates of conformity;

- Periodically perform maintenance or enhance the database;
- Make data available to the public, including making it available through the Internet;
- Analyze and manage requests for confidentiality;
- Determining if "carry over" of data from a previous model year is appropriate or if new testing will be required; and
- Store, file and maintain data.

*(a)(2) Agency PLT Activities*

- Answer questions from manufacturers and the public;
- Review submissions for format and completeness;
- Input data into the database;
- Analyze and compare results to standards and FELs;
- Request and review additional information as needed;
- Take any appropriate enforcement actions;
- Keep records of the information submitted and EPA's actions and determinations;
- Periodically perform maintenance or make enhancements to the database;
- Make data from completed test programs available to the public, including posting it on the Internet; and
- Analyze and manage requests for confidentiality.

*(a)(3) Agency In-use Testing Activities*

- Evaluate testing requirements;
- Review information and identify engines for testing (if additional testing is needed);
- Inform manufacturers of testing to be conducted;
- Perform testing;
- Analyze, compare and file information submitted; and
- Keep records.

*(a)(4) Agency Special Compliance Provisions Activities*

- Receive and evaluate requests for exemptions;
- Inform manufacturers whether their request was approved;
- Keep records.

*(a)(5) Agency SEA Activities*

- Request and gather production data from manufacturers;
- Make a determination as to which manufacturers and engine families to audit;
- Issue an SEA test order;
- Travel to the testing laboratory to witness the testing;
- Oversee testing, ensure proper procedures are followed, answer questions;



- Analyze, compare and file information submitted
- Keep records; and
- Refer to the enforcement office if the noncompliance is found.

## **5 (b) Collection Methodology and Management**

Exhaust and IMO certification applications are submitted and collected electronically. Engine manufacturers fill Form 5900-124, a FileMaker Pro-based form. The form is then submitted via the Internet into OTAQ's Document Module. The forms are then retrieved by agency contractors and uploaded into the Engine Information Management System. EPA is currently developing a new Oracle-based database to receive, house and process marine CI applications for certification. The new database will be part of VERIFY, CD's engine and vehicle emissions database. With VERIFY uses webforms, so manufacturers will be able to submit data over the internet without templates. Additional information about VERIFY and how manufacturers use the system can be found at <http://epa.gov/otaq/verify/basicinfo.htm>. EPA expects this module to be available in 2014.

For Production Line Testing Program (PLT), EPA has developed Excel-based form 5900-297 (CumSum) or Form 5900-298 (non-CumSum). Manufacturers also submit these forms through the Document Module. The information is then electronically uploaded into the Compliance Database. SEA reports can be submitted electronically, but the manufacturer may submit SEA reports using other methods as they see fit.

All of the forms mentioned can be downloaded from EPA's website at <http://www.epa.gov/otaq/certdat2.htm>.

Once the data is received, the certification and compliance reviewers analyze the information to ensure compliance with the CAA and applicable regulations.

Non-confidential portions of the applications for certification are available through the Engine Certification Information Center at <http://www.epa.gov/otaq/certdata.htm>.

## **5 (c) Small-Entity Flexibility**

In its 2009 thorough review of the Category 3 engine and vessel market, EPA found that there are no small businesses, as defined by the Small Business Administration for each affected NAICS code, operating in the US that would be significantly affected by these requirements<sup>3</sup>. Therefore, there is no need for special provisions for small businesses. That finding is consistent with the data received by EPA over the years through the applications for certification. EPA also

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<sup>3</sup> Source: Regulatory Impact Analysis: Control of Air Pollution from Category 3 Marine Diesel Engines, EPA-420-R-09-019. December 2009.

believes that this will continue to be the case for the next three years.

However, EPA does provide avenues to lower costs such as allowing the carry-over of data from one model year to the next and the use of alternative methods to demonstrate compliance.

#### **5(d) Collection Schedule**

Collection frequency is largely determined by the manufacturer's marketing and product plans. Information must be submitted for each 'model year' that a manufacturer intends to build (or import) an engine model. A certificate of conformity must be obtained before the start of production (or importation). Taking these two considerations into account, manufacturers normally submit information on an annual basis and submit their applications at their earliest convenience.

Running change and correction applications are submitted by manufacturers as the need occurs. PLT reports are submitted quarterly. SEA reports are submitted on occasion, after EPA has completed an audit.

### **6. Estimating Burden and Cost of the Collection**

#### **6 (a) Estimating Respondent Burden**

Burden estimates were taken from previous ICRs and adjusted to reflect comments from fewer than ten respondents consulted by EPA. These estimates are included in Tables 1 through 6. While Table 1 is part of this document, Tables 2 through 6 are included in the Excel file that accompanies this supporting statement.

#### **6 (b) Estimating Respondent Costs**

Please see Tables 2 through 5 which are included in the Excel file that accompanies this supporting statement.

##### **(i) Estimating Labor Costs**

To estimate labor costs, EPA used the Bureau of Labor Statistics' (BLS) National Industry-specific Occupational Wage Estimates (May 2012) for the Engine and Turbines Industry under Standard Industrial Classification (SIC) code 351 and increased by a factor of 1.6 to account for benefits and overhead. Mean, hourly rates were used for this estimate and are listed below.

**Table 1  
Labor Costs Estimates**

<b>Occupation</b>	<b>SOC Code Number</b>	<b>Mean Hourly Rate (BLS)</b>	<b>Rate Increased by Factor of 1.6</b>
Mechanical Engineers	17-2141	\$40.75	\$65.20
Engineering Managers	11-9041	\$64.06	\$102.50
Lawyers	23-1011	\$62.93	\$100.69
Secretaries, Except Legal, Medical and Executive	43-6014	\$16.13	\$25.81

**(ii) Estimating Operations and Maintenance Costs**

All Operation and Maintenance (O&M) costs are listed in Tables 2 through 5. Wherever possible, estimates were developed using current costs. For others, EPA used the Bureau of Labor Statistic's Consumer Price Index Inflation Calculator, which can be found at [http://www.bls.gov/data/inflation\\_calculator.htm](http://www.bls.gov/data/inflation_calculator.htm).

While O&M costs for this collection request include costs such as telephone calls, postage and electronic storage for recordkeeping, the largest O&M cost is emissions testing. For certification purposes, emissions testing results can be carried from one year to the next; therefore, respondents do not incur in this expense for carry over families (see section 4(b)(i)(1) for details). For PLT, each engine must be tested either at its vessel's sea trial or within the first 300 hours of operation, whichever comes first. The overall cost of the program is greatly reduced by the fact that most engine families only have projected productions of between one and four engines each. Only one engine family reported a projected production greater than that (50 engines). EPA estimates that the average cost for testing marine CI Category 3 engines is \$10,853. This cost is incurred only once per engine family for certification. For PLT, however, testing must be performed on each and every engine. This estimate assumes that the testing is integrated into the sea voyage. Other approaches, such as hiring a third party to run a stand-alone emission test, could be much more expensive.

Marine CI engine manufacturers are required to pay a fee with each application for a certificate of conformity. This fee, which is recalculated every year, is requested under the authority of the CAA Section 217. EPA published the 2014 schedule of fees (CISD-13-03, which can be found at <http://www.epa.gov/otaq/fees.htm>) on March 7, 2013. For model year 2014 exhaust emissions and IMO certificates, the required fee is \$563.

### **(iii) Capital/Start-up Costs**

Testing of Marine CI Category 3 engines is done at sea, after the engine has been installed in a vessel, and using portable emission devices. No laboratories or facilities are necessary to comply with this collection. Furthermore, testing devices are frequently integrated into the engine/vessel itself and used for purposes other than EPA-required testing. Thus, no capital or startup costs are anticipated for purchasing emission testing equipment.

### **(iv) Annualizing Capital Costs**

There is no capital or start up cost associated with the renewal of this ICR. See 6(b)(ii) for details.

## **6 (c) Estimating Agency Burden and Cost**

Table 6 summarizes EPA's labor costs and burden associated with this information collection. The 2013 hourly rate was obtained from the Office of Personal Management, and adjusted by a factor of 1.6 to account for benefits and overhead.

## **6 (d) Estimating the Respondent Universe and Total Burden and Costs**

#### *(6)(d)(i) Certification*

In 2013, EPA received approximately seven certification applications from four manufacturers. Five of the applications (from four manufacturers) are for exhaust families, while two applications (from two manufacturers) are for IMO families. The two of the companies in both categories are the same, so the total number of respondents is four. EPA estimates that those numbers reflect what will occur every year throughout the next three years.

Of the five exhaust families, three years are “carry overs”. The remaining two applications represent new engine families for which new emissions data was collected. Since EPA expects to receive approximately 2 new engine family applications annually, the cost of testing was not annualized for those families. In contrast, IMO families only need to be certified once unless major changes are made to the engine design. Therefore, testing costs associated with IMO applications have been annualized.

As indicated in section 4(b), evaporative certification costs and burden have been accounted for under ICR 1695.11, OMB Number 2060-0338; and have therefore been excluded from this ICR.

#### *(6)(d)(ii) PLT Testing*

Every marine CI Category 3 engine certified to exhaust standards must be tested under PLT. PLT testing is not required for IMO families. Of the five engine families certified to exhaust standards, four had a projected annual production of between one and four engines each. Only one engine family projected its production above that (50 engines). In summary, the total projected annual production for the marine CI Category 3 industry is of only 60 engines; which averages 15 engines per manufacturer for all four manufacturers.

PLT reports must be submitted quarterly for each engine family. The reports are due 45 days after the end of each quarter in which respondents manufactured engines. Since most engine families have less than four engines, most engine families have production in one or two quarters only. EPA estimates that it will receive approximately 11 PLT reports on any given year.

#### *(6)(d)(iii) In-use Testing & SEAs*

While EPA does not currently plan to conduct in-use testing or SEAs on Category 3 engines, we have accounted here for the burden associated to one SEA in the next three years. Since it is only one occurrence for the duration of this collection request, we have annualized the cost associated to it. Since in-use testing is conducted at the agency’s expense, no burden has been allocated for respondents.

#### *(6)(d)(iv) Special Compliance Provisions (Exemptions)*

Special provision requests for Category 3 engines and vessels are very rare. While EPA

has not recently received requests for exemptions from respondents to this collection, we have allocated burden for one exemption request for the three year period covered by this collection request. The burden estimates are consistent of what respondents to other collections may spend.

*(6)(d)(v) Vessel Owners, Operators & Rebuilders*

EPA estimates that 200 companies would be affected by new requirements to keep records related to rebuilding, maintaining, or adjusting engines. These estimates are based on the projected costs for each company to gather data, keep records and submit reports, if applicable. The requirements that owners, operators and rebuilders must comply with are discussed in section 4(b)(i)(8).

*(6)(d)(vi) Total Number of Reports per Respondent*

The number of reports each respondent submits per year varies depending on several factors, such as: (1) number of engine families produced each model year, (2) the size of each family, (3) the number of corrections to the application for certification needed throughout the year, and (4) whether the respondent elects to avail itself of a special provision, such an exemption. The total number of responses for this collection has been calculated at four. Then, using model year 2013 data, we calculate that EPA will receive a total of 32 reports annually: 7 certification applications + 13 running changes and corrections + 11 PLT reports + 1 special provision request or SEA report. The average number of responses per respondent (32/4) equals 8.

**6 (e) Bottom-Line Burden Hours and Cost Tables**

**(i) Respondent Tally**

Bottom-line burden and cost for the first three years of the rulemaking are shown in Table 7. These estimated costs include startup expenses (for example, the purchase of emission sampling equipment and new recordkeeping software).

Table 7  
Respondent Tally

Program	Number of Respond.	Number of Activities	Total Hours Per Year	Total Labor Cost Per Year	Total Annual Capital Costs	Total Annual O&M Costs	Total Costs
Certification	4	13	673	\$46,275	-	\$33,835	\$80,109
PLT	4	9	5,276	\$84,253	-	\$659,775	\$744,028
SEAs	1	8	50	\$3,406	-	\$3,278	\$6,685
Owners,	192	5	18,813	\$1,063,243	-	\$37,700	\$1,100,943

Ops & Rbldrs							
Totals:	201	35	24,813	\$1,197,177	-	\$734,588	\$1,931,765

*Estimated average hours per respondent = total hours/# of respondents = 123 hours/respondent*

**(ii) Agency Tally**

Number of Respondents:	201
Number of Activities:	24
Total Hours Per Year:	250
Total Labor Cost:	\$103,990
Total Annual Capital Costs:	\$0
Total Annual O&M Costs:	\$29,800
Total Costs:	\$133,790

**6(f) Reasons for Change in Burden**

There is an increase of 21,741 hours in the total estimated burden for ICR 2345.03 from the burden currently identified in the OMB Inventory of Approved ICR Burdens. This increase is due to better accounting and an adjustment of estimates, not a change in the program. The primary reason for the change is that the hour burden in the previous ICR did not account for an annual records audit that vessel owners have to perform and the annual report they have to submit (first rows of table 5 in the Excel file). The previous ICR only accounted for owner and rebuilders’ recordkeeping requirements (see table 6 on 2345.02). There are 187 respondents that are supposed to prepare that report; so even though the burden is only 99 hours per respondent, the total comes out high (at 18,813 hours). Second, regarding the burden to engine manufacturers, this ICR accounts for PLT testing and reporting (5,276 hours – see table 3) and SEAs (table 4), which was not done in the previous ICR. The previous ICR only accounts for certification (table 5 on 2345.02 vs. table 2 in 2345.03).

**6(g) Burden Statement**

The annual public reporting and recordkeeping burden for this collection is estimated to average 123 hours per respondent for certification and compliance activities. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a

person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR Part 9 and 48 CFR Chapter 15.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques, EPA has established a public docket for this ICR under Docket ID Number EPA-HQ-OAR-2013-0246, which is available for online viewing at [www.regulations.gov](http://www.regulations.gov), or in person viewing at the Air and Radiation Docket and Information Center in the EPA Docket Center (EPA/DC), EPA West, Room 3334, 1301 Constitution Avenue, NW, Washington, D.C. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566-1742. The electronic version of the public docket at [www.regulations.gov](http://www.regulations.gov) can be used to submit or view public comments, access the index listing of the contents of the public docket, and to access all documents in the public docket. When in the system, select "search," then key in the Docket ID Number identified above. Also, you can send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW, Washington, D.C. 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number EPA-HQ-OAR-2013-0246 and OMB Control Number 2060-0641 in any correspondence.