

Supporting Statement

for

Information Collection Request

Emissions Certification and Compliance
Requirements for Nonroad Compression-ignition Engines
and On-highway Heavy Duty Engines
(Renewal)

42 USC 7521 § 206
42 USC 7521 § 213(d)
40 CFR Part 86
40 CFR Part 89
40 CFR Part 94

August 2004

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 and Number of the Information Collection

Emissions Certification and Compliance Requirements for Nonroad Compression-ignition Engines and On-highway Heavy Duty Engines (Renewal); EPA ICR Number 1684.06, OMB Control Number 2060-0287.

1(b) Short Characterization

This supporting statement consolidates portions of three previously existing ICRs (EPA Numbers 1684.05, 0011.08 and 1897.05) into ICR number 1684.06). This action is undertaken to consolidate information requirements for the same industry into one ICR for simplification and to eliminate duplicity. All three ICRs cover programs with similar, almost identical, requirements and address the same set of respondents.

With this consolidation, we combine most of the burden associated with emission certification and compliance requirements affecting manufacturers of nonroad compression-ignition engines, on-highway heavy-duty engines, and marine CI engines. We should note that respondents for all three collections are, for the most part, the same companies. In this ICR, we are specifically consolidating burden associated with participation in the Certification, Averaging, Banking and Trading (AB&T), Production-line Testing (PLT) and Selective Enforcement Audits (SEAs) Programs.

ICR 1684.05 covered nonroad CI engine and on-highway heavy duty engine applications for emission certification and participation in the AB&T program. ICR 0011.08 covered SEA requirements for the same sectors. (ICR 0011.08, OMB Control Number 2060-0064, expired on 8/31/1999; no collection of information from ICR 0011.08 has been conducted since its expiration; upon approval of ICR 1684.06, the agency shall resume this information collection). ICR 1897.05 covered all three programs - certification, AB&T and SEA- for marine CI engine manufacturers.

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 those engines that comply with applicable emission standards. Such a certificate must be issued before engines may be legally introduced into commerce. To apply for a certificate of conformity, manufacturers are required to submit descriptions of their planned production engines, including detailed descriptions

of emission control systems and test data. This information is organized by "engine family" groups expected to have similar emission characteristics. There are also recordkeeping requirements.

Those manufacturers electing to participate in the AB&T Program are also required to submit information regarding the calculation, actual generation and usage of credits in an initial report, end-of-the-year report and final report. These reports are used for certification and enforcement purposes. Manufacturers will also maintain records for eight years on the engine families included in the program.

The Act also mandates EPA to verify that manufacturers have successfully translated their certified prototypes into mass produced engines, and that these engines comply with emission standards throughout their useful lives. Under the Production-line Testing (PLT) Program, manufacturers are required to test a sample of engines as they leave the assembly line. This self-audit program (referred to as the "PLT Program") allows manufacturers to monitor compliance with statistical certainty and minimize the cost of correcting errors through early detection. Through Selective Enforcement Audits (SEAs), EPA verifies that test data submitted by engine manufacturers is reliable and testing is performed according to EPA regulations.

This information is collected by the Engine Programs Group (EPG), Certification and Compliance Division (CCD), Office of Transportation and Air Quality (OTAQ), Office of Air and Radiation (OAR), U.S. Environmental Protection Agency (EPA). Besides CCD, this information could be used by the Office of Enforcement and Compliance (OECA) and the Department of Justice for enforcement purposes. Confidential Business Information(CBI)is also disclosed in a public database and over the Internet. It is used by trade associations, environmental groups, and the public. The information is usually submitted in an electronic format, and it is stored in EPG's certification database.

It has been estimated that a total of 68 manufacturers will respond to this collection with an approximate cost of \$13,978,203.

2. Need for and Use of the Collection

2(a) Need/Authority for the Collection

Vehicle and engine manufacturers may not legally introduce their product into US commerce unless EPA has certified that their vehicles and engines comply with applicable emission standards. To ensure compliance with these statutes, EPA reviews product information and manufacturers' test results. EPA also tests some vehicles and engines to confirm manufacturers' results.

EPA's emission certification programs are statutorily mandated; the agency does not have discretion to cease these functions. 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 also applies to nonroad engines, pursuant to §213(d) of the CAA. Also, under the authority of the CAA §217, on-highway engine manufacturers are required to pay a fee when applying for a certificate of conformity.

EPA also conducts an Averaging, Banking, and Trading (AB&T) Program. This program is one of many regulatory features designed to enhance the compliance flexibility for and reduce the burden on the affected engine manufacturers, without compromising the expected emissions benefit derived from these emissions standards.

Section 206(b)(1) of the Act authorizes EPA to inspect and require testing of new vehicles and engines to: (1) verify that manufacturer's final product actually complies with EPA standards; (2) assure that the correct parts are installed correctly in each engine; and (3) audit the manufacturer's testing process to ensure testing is being done correctly. The Production Line Testing Program (PLT) and the Selective Enforcement Audit Program (SEA) fulfill these requirements by inspecting and testing engines taken directly from the assembly line and by auditing the engine manufacturer's testing procedures and facilities.

The programs are codified at the following parts of Title 40 of the Code of Federal Regulations:

Table 1

Regulations

Program	Nonroad CI 40 CFR Part 89	Heavy-duty On-highway 40 CFR Part 86	Marine CI 40 CFR Part 94
Certification	Subpart B	Subpart D	Subpart C
AB&T	Subpart C	Subpart A	Subpart D
PLT	N/A	N/A	Subpart F
SEA	Subpart F	Subpart K	Subpart F

The subparts listed specifically contain the reporting and recordkeeping requirements listed in this ICR. Other Subparts in each Part provide information that support and supplement the Subparts listed.

2(b) Practical Utility/Users of the Data

EPA uses certification information to verify that the proper engine prototypes have been selected and that the necessary testing has been performed to assure that each engine complies with emission standards.

The AB&T program allows manufacturers to generate emission credits. Under averaging, a manufacturer could certify one or more engine families within its product line at levels above the emission standard, provided the increased emissions are offset by emission reductions from one or more families certified below the standard. The average emissions (weighted by horsepower and production) from all the manufacturer's engine families involved in the program in a given model year must be at or below the emission standard. The banking program would allow a manufacturer to bank credits generated in one model year for use in averaging or trading in subsequent model years. The trading program would allow credit transactions between manufacturers.

During the certification phase, manufacturers submit emissions data obtained through testing an engine prototype. In order to verify that a manufacturers' final products do comply with emission standards, manufacturers test engines directly from the assembly line (PLT). Through SEAs, EPA verifies that manufacturers' testing procedures comply with applicable regulations and that test data submitted by manufacturers during certification is reliable. SEAs also provide manufacturers with

feedback on the effectiveness of their production quality-control techniques and how effectively their prototype designs translate into a mass produced engine. SEAs assure that the correct parts are installed in the correct manner on each engine and vehicle.

EPA uses the information requested to support various enforcement actions as mandated by the CAA. This information collection enables EPA to ensure that engine manufacturers are complying with applicable emission regulations, measure the impact of nonroad engines' emissions on air quality, and take corrective actions as needed.

The information will be received and used by EPG/CCD/OTAQ/OAR. Non-confidential portions of the information submitted to EPG is available to and used by importers, environmental groups, members of the public and local, state and federal 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 (and sometimes confidential) nature, and the fact that it must be submitted to EPA prior to the start of production, the information collected is not available from any other source. Furthermore, some of the information requested under the AB&T --such as actual sales volumes-- is confidential in nature; therefore EPA can only obtain it if the manufacturers submit it. Participation in the program is voluntary.

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 (69 FR 34158) on June 18, 2004. A copy of this FR notice is provided in this package. Only one comment was received and was directed to several ICRs, not only to this one.

The commenter expressed concerns that engine emissions affect human health and EPA should "insist on zero emissions" for all nonroad engines.

3(c) Consultations

EPA consulted less than ten past respondents regarding this information collection burden.

Contact: George Valencia
Company: Daewoo Heavy Industries
Phone: 770-831-2228

Contact: Richard Bishop
Company: Deere Power Systems
Phone: 319-292-8157

Contact: Saul Boast
Company: Caterpillar
Phone: 309-675-5217

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.

For practical reasons, PLT reports are submitted on a quarterly basis. Manufacturers are required to test up to one percent of their production at random to ensure that mass produced 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. Engine manufacturing companies update their internal production volume reports every quarter. By conducting this quality control testing also on a quarterly basis, manufacturers are able to learn about and address any problems early, before the start of the next quarter's production, thus minimizing costs.

SEA information is only collected on occasion, when EPA audits a manufacturer.

3(e) General Guidelines

According to 40 CFR 86.098-7(on-highway) and 89.210-96(nonroad), certification, AB&T, and end-of-the-year report related records must be maintained for eight years. However, "records may be retained as hard copy or reduced to microfilm, ADP film, etc., depending on the manufacturer's record retention procedure, provided that in every case all the information contained in the hard copy is retained." These recordkeeping requirements stem, in large part, from the statutory requirement to warrant some items for long periods of time. In addition, the manufacturers must comply with requirements to recall vehicles and 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 vehicle or engine to which it pertains is available for purchase.

Manufacturers are required to submit test results and information within 5 working days after all engines ordered to be tested under SEA have been tested. The items requested are all readily available or generated during the SEA. The information is requested in less than thirty days so that EPA can verify the accuracy and validity of the emission data and expeditiously reach a conclusive audit decision. An expeditious audit decision allows the manufacturer to quickly release the tested vehicles or engines for introduction into commerce.

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/SIC Codes

Respondents are manufacturers of non-road engines within the following North American Industry Classification System (NAICS) codes:

333618 Other Engine Equipment Manufacturing
336312 Gasoline Engine and Engine Parts Manufacturing

4(b) Information Requested

All manufacturers must describe their products and supply test data to verify compliance. This information is organized by "engine family" groups expected to have similar emission characteristics. Manufacturers must also retain records.

The certification burden for a given engine family is reduced after the model's first production year, because data and information from previous years can be "carried over" when no significant changes have occurred. For instance, an engine family certified in model year 2004 can be certified in the 2005 model year by "carry over" of data and paperwork from the 2004 model year if no significant changes have occurred to the engine family between model years. EPA may also allow manufacturers to "carry across" data and paperwork from on-highway certification of an engine family which they produce for both the on-highway and nonroad markets if there are no significant differences between the on-highway and nonroad versions of the engine family. Allowing manufacturers to "carry over" and "carry across" data and paperwork saves manufacturers the burden of duplication of data and paperwork which would occur in the absence of such provisions.

Engine manufacturers are also required to pay a fee 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. A new fee schedule was recently published in the Federal Register. See section 6(b)(ii) for details.

(i) Data Items

Although different data items may be requested depending on the type and specific characteristics of the engine family to be certified, the data requested is similar for all three engine categories included in this ICR (nonroad CI, marine CI and on-highway heavy-duty). Some of data items are only required to be kept in records and submitted upon request.

EPA encourages manufacturers to apply electronically and has developed a simple electronic application format. A copy of the application template is attached. The Large Engine Application Form is designed to be used by both nonroad and on highway engine manufacturers. The Marine CI Application Form is used by marine CI manufacturers. Questions are answered as applicable to each engine category. A complete application consists of (1) a Statement of Compliance, (2) a Family Information Form (FIF), (3) a Test Information Form (TIF), (4) a Technical Description Form (TDF), (5) an Engine Model Summary (EMS), and (6) an Engine Part Summary (EPS). However, manufacturers requesting a certificate of conformity for evaporative engine families are only required to submit the Statement of Compliance and an Evaporative Engine Form (EEF). There is also a Production Line Testing Information Form.

The following are lists of data items requested under each program. Other data items may be listed in the regulations. EPA Regulations provide that the Agency may also require additional information as needed to evaluate the application for certification and compliance with requirements.

A. Certification:

**Information Items Requested Under
The Certification Program**

- Statement of compliance
- Identification and description of the basic engine design including, but not limited to, the engine family specifications (fuel, cooling medium, etc.)
- An explanation of how the emission control system operates
- Fuel System type and components
- Useful life Period

- Deterioration factors
- Intended Service Class
- Projected Sales
- Estimated Production Period
- Sales Area
- Plant Contact and Location
- Program information
- Family emission limits
- Nonroad engine equipment types
- Detailed description and justification of each auxiliary emission control devices (AECD), and how they affects emissions
- A description of all adjustable parameters, their adjustable ranges and methods employed to prevent tampering, etc
- Detail drawings and descriptions of the of the various emission related components
- A description of the test equipment and fuel to be used
- A 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
- A statement of the useful life
- If applicable, a statement of the alternative useful-life period and a brief synopsis of the justification
- 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

- The period of operation necessary to accumulate service hours on test engines and stabilize emission levels
- Fee Filing Form

For Heavy-duty engines only:

- For evaporative families:
- a description of any unique procedures required to perform evaporative and/or refueling test, and of the method used to develop those unique procedures
- Canister working capacity, canister bed volume, and fuel temperature profile for the running loss test
- Maximum nominal fuel tank capacity
- Certification standard
- Weight category
- The manufacturer shall identify those families which will not comply with cold temperature CO standards
- For families incorporating an emission control diagnostic system: a full and detailed description of its functional characteristics, the method of detecting malfunctions, and provisions taken to prevent tampering
- For methanol-fueled vehicles: whether the vehicle is flexible or dedicated, and the fuel for which the vehicle was design

For Marine CI engines only:

- all information required for EPA to interpret all messages and parameters broadcast on an engine's controller area network
- Information about the engine family's compliance with the 'Not to Exceed Standards'

Manufacturers must keep records for eight years (86.094-7(a)(3), 89.124-96(b) and 94.215(a)(3))except routine emission records. Manufacturers must keep routine emission records for only one year.

Recordkeeping Requirements Certification

General records:

- Identification and description of all engines for which testing is required
- Description of emission control systems
- 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 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 vehicle
- Actual U.S. sales volume
- For Heavy Duty engines model 1996-98: Shipment date, purchaser, purchaser contract, and EPA evaporative/refueling family
- Routine emission test data

When a manufacturer needs to make changes to a certified engine, or to add an engine model to an already certified engine family, the following information must be submitted. Running changes are submitted using the same electronic format used to apply for a certificate of conformity.

Running Changes

- Notification of changes made to the application and request to amend the application
- A full description of the change to be made
- Engineering evaluations or data showing that engines as modified or added will comply with all applicable emission standards
- A determination whether the original test fleet selection is still appropriate, and proposed new test fleet selections, if applicable
- Upon request, test data on the engine changed or added
- Supporting documentation, test data and engineering evaluations as appropriate to demonstrate that all affected engines will still meet applicable emission standards

Each manufacturer is also required to submit the following information:

Annual Production Report and Hearings

- An annual production report identifying the number of engines produced by engine family, by gross power, by displacement, by fuel system, or by other categories as the Administrator may require.
- If the manufacturer requests a hearing on the Administrator's denial or revocation of a certificate of conformity, the request shall be filed within 30 days of the Administrator's decision, shall be in writing, and shall set forth the manufacturer's objections to the Administrator's decision and data to support the objections.

The Engine Model Summary (EMS) is requested to evaluate whether engine families were developed correctly. The information contained in this form allows EPA engineers to know if the engine models were grouped correctly, and, most important, if the test data submitted corresponds to the worst case within that family. The calculation of the engine's rated power, torque, etc., is customary business practice.

The Part Summary Form (PSF) allows EPA to make sure that the engine is actually built in its certified configuration. This information is used when conducting Selective Enforcement Audits. The Selective Enforcement Program is covered by a separate ICR.

B. Average, Banking and Trading (AB&T):

AB&T data requirements can be found at part 89, subpart C for nonroad CI engines, part 86 subpart A, for HD Engines and part 94 subpart D for marine CI engines.

**Information Items Required Under
the Average, Banking and Trading Program**

- Intent to include this specific engine family in the ABT program
- Declaration that participation in this program will not cause the applicable emission standard to be exceeded (have negative credit balance)
- Family emission limit
- Projected applicable¹ production volumes for the model year
- Values required to calculate credits
- Projected number of credits generated/used

¹Applicable production volume includes only those engines that have been tracked to a location defined as a point of first retail sale within the U.S., excluding ineligible states.

- If credits are generated, the designated use of the credits involved or if credits are used, the source of those credits

AB&T records are to be kept for eight years (86.094-7(c)(3, 89.210-96(d) and 94.308(d)).

**Recordkeeping Requirements
Average, Banking and Trading Program**

- EPA engine family
 - Engine identification number
 - Engine build date and model year
 - Power rating
 - Purchaser and destination
 - Assembly plant
 - Family emission Limit
 - Useful life
 - Projected and actual production model
 - For families participating in trading, the following records must be kept quarterly:
 - Actual quarterly and cumulative applicable production/sales volume
 - Value required to calculate credits
 - Resulting type and number of credits generated/required
 - How and where credit surpluses are dispersed
 - How and through what means credit deficits are met
- C. Selective Enforcement Auditing (SEAs) and Marine CI Production Line Testing

All Nonroad CI engine manufacturers are subject to be audited by EPA. EPA collects the information needed for SEAs in two stages: First, a limited number of manufacturers is 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 chosen, 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. This "audit" information is then used to determine compliance with applicable emission standards.

Per 89.505 (d) and 86.1005-90(d), EPA can request manufacturers to submit additional SEA information or keep records not specifically listed in this section. SEA data requirements can be found at part 89, subpart F for nonroad CI engines, part 86 subpart K, for HD Engines.

Although there are no SEA requirements under marine CI regulations, marine engine manufacturers must conduct PLT Testing. The marine CI PLT Program has data requirements very similar to those of the SEA program, however testing requirements are different. Whereas in SEA, manufacturers are only required to test on occasion, when EPA orders testing, under the PLT Program manufacturers must test a sample of engines every quarter.

Pre-Audit Data Requested Under the Selective Enforcement Auditing Program

Upon EPA's request, engine manufacturers must submit the following information regarding engine production. EPA uses this information to determine which engines will be audited:

- Projected US sales data for each engine configuration
- Number of engines, by configuration and assembly plant, scheduled for production within the time period designated by EPA
- Number of engines, by configuration and assembly plant, storage facility or port facility, scheduled to be stored during the time period designated by EPA
- Number of engines, by configuration and assembly plant, produced during the designated period that are complete for introduction into commerce

Within five working days after all tests ordered by EPA are completed, manufacturers must submit a report with the following

information:

**Audit Data Requested Under
the Selective Enforcement Auditing Program
and Marine CI Production Line Testing Program**

- Testing facilities' location and description
- The applicable standards or compliance levels against which the engines were tested
- Deterioration factors for the selected configurations
- A description of the engine and the method used to select its emission-related components
- For each test conducted:
 - Test engine description
 - Location where service accumulation was conducted and a description of the procedure
 - Test information, raw results, etc.
 - A complete description of any modification, repair, preparation, maintenance and/or testing performed on the engine not previously reported
 - If an engine was deleted from the test sequence by authorization of EPA, the reason to delete it.
 - Brake-specific fuel consumption values for all valid and invalid tests
 - Any other information requested by EPA
- A statement of compliance and endorsement
- Manufacturers can request EPA to allow re-testing of failed engines

Records must be kept for one year after all ordered tests have been completed. Records may be kept in any media, according to the manufacturer's procedures, provided that in every case all the information contained in the hard copy is kept.

**Recordkeeping Requirements Under
the Selective Enforcement Auditing Program
and Marine CI Production Line Testing Program**

- General records: a description of all test equipment used
- Individual records for each audit:
 - Date, time and location of each test
 - Number of hours accumulated in each engine when testing began
 - Names of all supervisory personnel involved
 - Detail records of all repairs performed prior/after EPA's authorization
 - Date engine was shipped and date it was received
- A complete record of all tests performed including worksheets and other documentation required under 90.405, 90.406, 90.418, and or 90.425, as applicable.
- A brief description of any significant event occurred during the audit
- A copy of the trace for each test
- A description of the equipment in each test cell that can be used to perform SEA testing

During an SEA, manufacturers are required to allow EPA officials to enter to facilities where engines are being manufactured, stored, or tested and where records may be located. Manufacturers are also expected to afford reasonable assistance (such as clerical or translation services, photocopying, etc) to EPA personnel conducting the audit. This requirements also apply when EPA conduct an audit while marine CI engine manufacturers conduct PLT testing.

When an engine family fails an audit or PLT, the certificate of conformity issued to that engine family may be revoked or suspended, in whole or in part, effective no later than 10 days after failure. A certificate may be suspended for other reasons established at 89.511(d), including refusal by the engine manufacturer to allow EPA to gain access to the appropriate

facilities. The affected manufacturer must then remedy the noncomformity, retest or reaudit. In any of these cases, the affected manufacturer must submit a report describing the reason for the noncompliance and the remedy to be implemented, among other items appropriate to each case (89.512(g) and (h)). Section 86.1012 explains revocation of certificates for heavy-duty, on-highway engines.

If the affected manufacturer disagrees with EPA's determination to revoke a certificate of conformity, the manufacturer may request a public hearing. A request for public hearing must be filed within 15 days after and must include:

**Public Hearings
Selective Enforcement Auditing Program
and Marine CI Production Line Testing Program**

- A statement as to which configuration(s) within a family is to be the subject of the hearing
- A concise statement of the issues to be raised by the manufacturer at the hearing
- A statement specifying reasons why the manufacturer believes it will prevail on the merits of each of the issues raised
- A summary of the evidence which supports the manufacturer's position on each of the issues raised

(ii) Respondent Activities

The activities manufacturers carry out under each program are as follows:

(ii) (a) Certification activities

- Review the regulations and the guidance document
- Develop engine family groups
- Test engines for compliance with emission standards
- Develop deterioration factors (on-highway and some categories of nonroad engines, see section 6(a) for details).
- Gather emissions data
- Submit the fee filing form (On Highway only)
- Pay the corresponding fee (On Highway only)

- Submit the Application for Certification
- Retain and maintain records, and submit them upon Administrator's request
- Submit an annual production report

(ii) (b) AB&T Activities

- Pre-certification Activities:
 - Familiarization with the AB&T program provisions
 - Determine which engine families will participate in ABT.
 - Project applicable production volumes for the model year for all engine families.
- Submit AB&T information with the certification application
- Gather information regarding point of first retail sale
- Monitor production volumes and engine sales (customary business practice)
- Develop and submit end-of-year reports
- Develop and submit final reports
- Store, file, and maintain information as required

(ii) (c) Selective Enforcement Auditing

- 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
- Keep records

(ii) (d) Marine CI Production Line Testing

- 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
- Keep records

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

5(a) Agency Activities

As part of the implementation of the certification programs, EPA officials carry out the following 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
- Store, file and maintain data

Activities related to AB&T involve:

- Reviewing requirements and providing guidance
- Entering the data into the database
- Receiving quarterly and final reports, reviewing calculations, making sure that the information submitted by manufacturers is accurate and complete
- Audit manufacturers reports and files to make sure all participants have zero or positive credit balances at the end of the year
- Keep records

In addition, when conducting SEAs, the agency must:

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

As part of the implementation of the PLT and SEA Programs, EPA officials carry out the following activities:

- Review and interpret applicable regulations
- Answer questions from manufacturers and the public
- Review submissions for format and completeness, input data into the database
- Analyze data submitted in reports, compare results to standards and FELs
- Request and review additional information as needed
- 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
- Analyze and manage requests for confidentiality
- Take any appropriate enforcement actions
- Keep records of the information submitted by manufacturers and EPA's actions and determinations

5(b) Collection Methodology and Management

EPA currently makes extensive use of electronic media in gathering and evaluating information from engine manufacturers. Manufacturers submit Certification, AB&T and SEA data in electronic formats.

Once the data is received, the information is entered into a database and reviewed for completeness. If the manufacturer chooses to make hard copy submittals, then EPA manually enters the information into the database. The certification reviewer analyses the information to ensure compliance with the CAA and applicable regulations.

The public can access non-confidential portions of the certification applications and test data by contacting EPG or through the Engine Certification Information Center at <http://www.epa.gov/otaq/certdata.htm>.

5(c) Small Entity Flexibility

Small on-highway engine manufacturers may use optional procedures outlined in 86.098 to demonstrate compliance with the general standards and specific emission requirements. These procedures apply to manufacturers with US sales, including all imported engines, of fewer than 10,000 units. The alternate procedures reduce small manufacturers' burden associated with durability data requirements, testing, determination of deterioration factors and certification test data. Small volume manufacturers are also exempt from some reporting and recordkeeping requirements associated to the certification of evaporative families (86.098-22(m)). Also, section 86.1008-2001 provides a reduced SEA testing schedule for heavy-duty engine manufacturers with projected US sales of 30,000 engines or less.

EPA can also approve a reduction in certification application fee upon request by the manufacturer. A fee waiver could be granted if: (1) the certificate is to be used to sell engines within the United States; and (2) the full fee exceeds 1% of the aggregate projected retail sales price of all vehicles covered by the certificate of conformity. Although this is a provision available to all manufacturers, it is beneficial to some small manufacturers. Section 6(b)(ii) provides more details.

Small volume manufacturers are excluded from marine CI PLT requirements.

Under the other programs included in this ICR, the information being requested is considered to be the minimum needed to effectively conduct and maintain integrity of the required certification and enforcement programs. Further measures to simplify reporting for small businesses do not appear prudent or necessary.

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, as manufacturers update their own production records.

SEA information is submitted on occasion, when EPA audits a manufacturer.

6. Estimating the Burden and Cost of the Collection

Refer to Tables 2 through 8 for details.

6(a) Estimating Respondent Burden

Burden estimates were taken from the previous ICRs and adjusted to reflect comments from fewer than 10 respondents consulted by EPA and EPA experience in these and other similar programs.

6(b) Estimating Respondent Costs

(i) Estimating Burden Hours

To estimate labor costs, EPA used the Bureau of Labor Statistics' National Industry-specific Occupational Wage Estimates (May 2003) for the Engine and Turbines Industry (SIC 351) and increased by a factor of 2.1 to account for benefits and overhead. The specific rates used are listed below. These are mean hourly rates.

**Table 9
Labor Costs Estimates**

Occupation	SOC Code Number	Mean Hourly Rate (BLS)	110%
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Mechanical Engineers	17-2141	\$30.61	\$64.28
Engineering Managers	11-9041	\$46.17	\$96.96
Lawyers	23-1011	\$51.83	\$108.84
Secretaries, Except Legal, Medical and Executive	43-6014	\$14.79	\$31.06
Mechanical Engineering Technicians	17-3027	\$21.62	\$45.40
Engine and Other Machine Assemblers	51-2031	\$16.00	\$33.60
Truck Drivers, Heavy and Tractor-Trailer	53-3032	\$18.04	\$37.88

(ii) Estimating Capital and Operations and Maintenance Costs

Capital costs (associated with building emission testing facilities) were incurred by manufacturers when the nonroad CI and on-highway heavy-duty engine industry became regulated for the first time. In the Marine CI sector, 10 out of 13 respondents are companies which manufacture engines regulated under other programs (nonroad CI, Marine spark-ignition, on-highway, etc) and have already invested in developing their own test cells. Those marine CI engine manufacturers who do not participate in other programs, are small companies with one or two engine families and a combined production volume of less than 200 engines. Their small production volume makes it more economical for them to contract out their testing needs than to build expensive test cells. Therefore, capital costs are excluded from this ICR. EPA does not expect any new engine manufacturers to build its own emission testing laboratories in the next three years. Other emission testing expenses are included as O&M costs as explained above.

Operation and Maintenance costs (O&M Costs) associated with this information collection include diskettes, photocopying, postage and other shipping expenses, calls, maintenance of emission laboratories (for those manufacturers that own testing cells), and testing costs (for those manufacturers that contract testing facilities). Diskettes are used by manufacturers to submit their electronic applications and to keep records.

Engine manufacturers that have in-house testing facilities use them for all their certification and compliance testing needs as well as for research and development. The cost of maintaining these laboratories have been estimated at \$62,000 per year. This estimate (which appears under the certification program estimates - Table 1) include the cost of test fuels, calibration gases and equipment.

EPA has also accounted for the cost incurred by those manufacturers who prefer to hire a contractor to conduct the necessary certification and compliance emission testing in the contractor's facilities. EPA has estimated that testing at a private facility costs, on average:

Heavy-duty and Large nonroad CI:	\$10,000
Marine CI:	\$1,500
Marine CI Category 3:	\$20,000 ²

Testing cost, however, is a one-time cost per engine family since manufacturers can carry over emissions data from one model year to the next. This cost has been annualized over the approval period requested for this ICR (3 years)

Heavy-duty and Large nonroad CI:	\$3,333
Marine CI:	\$500
Marine CI Category 3:	\$6,667

Engine manufacturers are required to pay a fee every model year when submitting an application for a certificate of conformity. This fee is requested under the authority of the CAA Section 217. EPA recently published the new schedule of fees in the Federal Register (69 FR 26224).

Nonroad CI Engines:	\$1,822
Heavy Duty Engines:	
Federal Certificate:	\$21,578
California-only:	\$826
Evaporative only:	\$826
Marine CI Engines:	\$826

The new fees rule provides for a reduction in fee when "the full fee exceeds 1.0 percent of the projected aggregate retail

²Category 3 refers to marine CI engines "with a specific engine displacement greater than or equal to 30 liters per cylinder" (40 CFR 94.2). They range in size from about 2,500 to 70,000 kilowatts (3,000 to 100,000 horsepower). These are very large marine diesel engines used for propulsion power on ocean-going vessels such as container ships, oil tankers, bulk carriers, and cruise ships. Their size makes them more expensive to test.

price of all vehicles or engines covered by that certificate" (69 FR 26226, Section F). The reduced fee must not exceed one percent of the aggregate retail price of the vehicles and engines covered by the certificate.

(iii) Capital/Start Up Costs

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

(iv) Annualizing capital costs

There are no capital costs associated with the renewal of this ICR. (See 6(b)(ii) for details.)

6(c) Estimating Agency Burden

Tables 10 through 13 explain EPA's overall burden associated with the programs contained in this information collection.

Table 10 summarizes EPA's labor costs associated with this information collection. These costs are based on 2004 hourly wage rates obtained from the Office of Personnel Management and adjusted by a factor of 1.6 to account for benefits and overhead.

**Table 14
Agency Labor Costs**

Occupation	Hourly Rate	160%
Engineer (GS-13/6)	\$39.16	\$62.66
Lawyers (GS-13/7)	\$41.46	\$66.34
Managers (GS-15)	\$48.03	\$76.85
SES-1	\$84.47	\$135.15
Senior © Employee)	\$11.81*	\$17.65*

*The salary of a senior for clerical support is \$11.81 per hour plus approximately 150% increase for benefits, for a total of

\$17.65. This data was obtained from EPG's financial officer.

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

6(d)(1) Certification Estimates

EPA receives approximately 901 certification applications from 68 engine manufacturers each year under the programs included in this collection request (nonroad CI, on-highway heavy-duty and marine CI). These responses are distributed as follows:

EPA receives about 94 on-highway heavy-duty applications annually and 657 nonroad CI applications for a total of 751 applications. There are 68 companies in this sector, many of which manufacture both on-highway heavy-duty and nonroad CI engines. Of these applications, 457 (or 61%) are carry overs. Five on-highway engine manufacturers also submit applications for evaporative engine families. They submitted 28 applications in 2004: 18 carry overs and 10 "non-carry overs". EPA also received 107 running changes from 14 manufacturers.

In the marine CI sector, EPA received 100 applications from 13 manufacturers. This is a newly regulated sector. Emission requirements became effective on January 1, 2004. Therefore, EPA will start seeing carry-over applications in 2005 applications. However, based on experience gained in the marine SI sector, EPA expects the number of applications to increase to 150 per year during the next three years, a third of which will be carry-overs. The estimates in Tables 4 through 7 are based on those projections.

Ten of the 13 engine manufacturers currently participating in the marine CI sector are large companies which are already familiar with EPA regulations and policies. Burden hour estimates for the various programs in marine CI industry are larger than in other sectors to account for a familiarization with the new regulations. These regulations, however, are modeled after and thus very similar to other emission certification and compliance programs.

6(d)(2) Average, Banking and Trading

Participation in AB&T is voluntary for all sectors. Twelve on-highway heavy-duty and nonroad CI manufacturers are currently participating in AB&T with a total of 105 families. Only five marine CI manufacturers have expressed interest in participating

in AB&T so far. Again, the number of hours allocated for each task is higher for marine CI than for other sectors to allow manufacturers to become familiar with the new regulations.

Reports and other activities in this program are carried out from a company perspective as opposed to on a per-engine family basis. Therefore, manufacturers need to submit only one report quarterly and one final report in which they account for their company's activities under AB&t.

6(d)(3) Production-line Testing

Only marine CI manufacturers are required to conduct PLT. Participation is mandatory. Class 3 engine families and small volume manufacturers³ are exempt. Since there are three small volume manufacturers participating in the marine CI certification program, only nine manufacturers are subject to marine CI PLT requirements. All of these manufacturers have in-house testing laboratories.

Currently, there are no PLT requirements for nonroad CI engines.

6(d)(4) Selective Enforcement Audits

EPA plans to conduct about 7 audits per year in the sectors included in this collection request. Since the majority of respondents own testing laboratories, it is more likely that the majority of the SEAs will entail in-house testing. However, EPA has accounted for audits to two manufacturers who contract out testing.

6(e) Bottom Line Burden Hours and Cost Tables

(i) Respondent Tally

Table 15
Total Estimated Respondent Burden And Cost Summary

³94.2 defines 'small-volume manufacturer' as a "manufacturer with annual U.S.-directed production of fewer than 1,000 internal combustion engines (marine and nonmarine). For manufacturers owned by a parent company, the limit applies to the production of the parent company and all its subsidiaries."

Program	Number of Respon	Number of Activities	Total Hours Per Year	Total Labor Cost Per Year	Total Annual Capital Costs	Total Annual O&M Costs	Total Costs
On-highway and Nonroad CI							
Certification	55	12	95,934	\$5,724,222	0	\$5,259,976	\$10,984,198
Evap Cert	5	9	1,442	\$70,708	0	\$25,544	\$96,252
AB&T	12	5	4,188	\$264,933	0	\$1,320	\$266,253
Marine CI							
Certification	13	12	30,485	\$1,798,901	0	\$163,438	\$1,962,339
ABT	5	5	2,025	\$129,605	0	\$550	\$130,155
PLT	9	10	6,327	\$341,084	0	\$16,101	\$357,185
SEAs - All sectors	10	9	3,203	\$163,866	0	\$17,955	\$181,821
Total	68	62	143,604	\$8,493,319	0	\$5,484,884	\$13,978,203

(ii) *The Agency Tally*

Table 16
Total Estimated Agency Burden And Cost Summary

Program	Number of Respon	Number of Activities	Total Hours Per Year	Total Labor Cost Per Year	Total Annual Capital Costs	Total Annual O&M Costs	
Certification	68	11	65,340	\$3,687,585	0	\$38,158	\$3,725,743
AB&T	17	6	322	\$20,177	0	\$158	\$20,335
PLT	9	10	605	\$39,103	0	\$298	\$39,401
SEAs	10	10	1,014	\$65,374	0	\$35,193	\$100,567
Total	68	37	67,281	\$3,812,239	0	\$73,807	\$3,886,046

6(f) Reasons for change in burden

Current ICR Burden:	143,604 hours
Previous ICR Burden:	<u>89,047</u> hours
Change:	54,557 hours

There is an increase of 54,557 hours in the total estimated burden for ICR 1684.06 currently identified in the OMB Inventory of Approved ICR Burdens. This increase is due to two factors: (1) we have done a better job at accounting for the time manufacturers spent responding to these collections, and (2) we are consolidating three ICRs into 1684.06 (1684.05, 0011.08 and part of 1897.05). Therefore, this change is due to an Adjustment.

Previous ICR 1684.05 only accounted for time engineers and clerical assistants spent responding to the collection. In this ICR, we have accounted for time spent by managers, attorneys, test cell operators, assemblers and transporters in addition to engineers and clerical assistants.

We have also added burden from two other ICRs: (1) ICR 11.08 which covered SEAs for the on-highway heavy-duty engines and nonroad CI engines, among other sectors, and (2) ICR 1897.05 which covered, among other programs, certification, ABT, PLT and SEA requirements for marine CI engines.

6(g) Burden Statement

On-highway heavy-duty engine manufacturers, nonroad CI engine manufacturers and marine CI engine manufacturers spend, in average, 2,112 hours in emission certification and compliance activities.

These estimates include time to review applicable regulations and guidance documents, generate and gather the necessary information, submit applications and reports, and maintain records.

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 EPA. 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 EPA 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 OAR-2004-0059, which is available for public viewing at the Air and Radiation Docket and Information Center in the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Avenue, NW, Washington, DC. 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. An electronic version of the public docket is available through EPA Dockets (EDOCKET) at <http://www.epa.gov/edocket>. Use EDOCKET to submit or view public comments, access the index listing of the contents of the public docket, and to access those documents in the public docket that are available electronically. 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, DC 20503, Attention: Desk Officer for EPA. Please include the EPA Docket ID Number OAR-2004-0059 and OMB Control Number 2060-0287 in any correspondence.

Part B of the Supporting Statement

This part is not applicable because no statistical methods were used in collecting this information.