



Discussion Paper

Proposed Australian certification process for products regulated under the new non-road spark ignition engines and equipment emissions standards

This paper provides an overview of the proposed process to obtain an Australian Certificate of Conformity for non-road spark ignition engines and equipment (NRSIEE). The NRSIEE Rules will set out the certification process and the technical requirements, including test procedures, equipment specifications and calibration and calculation of test results that will need to be met under the emissions standards.

Feedback is invited from NRSIEE manufacturers, suppliers and importers, and any other interested party, on the proposed arrangements set out in this paper for managing Australian certification applications by Department of the Environment and Energy (the Department).

Feedback is sought by **27 September 2017**. Comments can be sent directly to productemissions@environment.gov.au.

Feedback will help inform the drafting of the Rules. Further opportunity to comment on the certification process will be available when the exposure draft of the NRSIEE Rules is released later in 2017.

Overview of the new emissions standards for non-road spark ignition engines and equipment

The Australian Government is working to introduce national emissions standards for non-road spark ignition engines and equipment (NRSIEE). The Commonwealth Product Emissions Standards (PES) Bill was introduced into Parliament on 10 August 2017. Following passage of the Bill, this new Act will allow the Minister for the Environment and Energy to set emissions standards for NRSIEE and potentially other products, subject to future government priorities, to help improve air quality in Australia. The Department will administer the PES Act and NRSIEE emissions standards.

The NRSIEE emissions standards will be detailed in the Rules (subordinate legislation) made by the Minister under the PES Act. The PES Act will provide the framework for the NRSIEE emissions standards to:

- make it an offence to import new engines or equipment that do not meet the standards or to supply them within Australia
- provide a certification process for new domestic and imported products which are not already certified to United States Environmental Protection Agency (US EPA) or equivalent international standards¹
- provide mechanisms to consider requests for exemptions from standards
- provide cost recovery provisions to support government administration of the standards.

The Rules are expected to be made in late 2017. Once the Rules take effect, new NRSIEE may only be imported (from 1 July 2018) or supplied to the Australian market (from 1 July 2019) if they are certified to either the Australian emissions standard or accepted international standards.¹ The emissions standards will not be retrospective – they will not apply to NRSIEE people already own, or to second-hand NRSIEE.

Following the making of the Rules by the Minister, and approval of the Cost Recovery Implementation Statement, the Department will be able to accept applications for Australian certification.

¹ The new emissions standards will be based on US EPA and equivalent international standards. NRSIEE certified to the relevant standards adopted by: member states of the European Union, the Canadian Department of the Environment and Climate Change, and the California Air Resources Board (CARB) will be recognised as being compliant with the Australian NRSIEE emissions standards.

Certification

The Rules will provide a mechanism for applicants (such as importers and manufacturers of NRSIEE) to obtain an Australian Certificate of Conformity, where the product is not already certified to accepted international standards.

The Australian certification process will adopt the exhaust emissions standards and relevant testing provisions of the US EPA standards. Testing for Australian certification will need to be carried out through an appropriate test facility, either in Australia or overseas, and arranged and paid for by the manufacturer or importer.

Engine certification will require testing an engine type (or engine family, if applicable) in accordance with the technical requirements of the standards and submitting the test results and other relevant data to the certifying authority. In the case of the NRSIEE emissions standards, the certifying authority for Australian certification will be the Department.

If the test results and other evidence supplied in an application demonstrate that the engine meets the Australian emissions standards, the Department will issue an Australian Certificate of Conformity for that engine (or engine family, if applicable).

Once an engine has a valid certificate, there will be an ongoing obligation for engines manufactured under the certificate to comply with the emissions standards. This is usually achieved by applying quality assurance processes to the design and production of engines. The manufacturer will also have the responsibility to permanently mark or label production engines with the information required under the particular standard.

Key stages in the proposed Australian certification process are described in the next section of this paper.

Key stages in Australian certification process

The proposed Australian certification process involves six key stages:



Further details of each stage are outlined below with flowcharts provided at **Appendix 1**.

Registration

Applications for Australian certification are proposed be accepted through an online portal dedicated to the NRSIEE emissions standards, available through the Department’s website. This portal will contain the standardised forms needed to make applications for Australian certification.

Any party intending to make applications will need to register with the Department. Once registered, applicants will be provided with access to the online portal.

Engine Testing

The Australian certification process will adopt the technical requirements² of the emissions standards for (1) small non-road spark ignition engines and (2) marine spark ignition engines administered by the US EPA under Title 40 of the US Code of Federal Regulations (CFR)^{3 4}. The US emissions standards call up a separate US regulation (CFR 1065) which details the applicable testing requirements⁵. To meet Australian certification, applicants will be required to ensure that engines have been tested in accordance with the relevant technical requirements of the US standards.

Engines are able to be tested in a manufacturers own test facility or by an independent facility commissioned to undertake the testing. In either case, applicants must be able to show that the test facility has the technical capability and systems in place to ensure the testing was conducted in accordance with the requirements set out in the Rules.

² “technical requirements” means the requirements of a standard governing technical, non-administrative matters, such as:

- (a) emission standards and associated tests;
- (b) not to exceed standards and associated tests;
- (c) test equipment, including calibration requirements;
- (d) calculation of engine power;
- (e) determination of deterioration factors;
- (f) defeat devices and defeat strategies; and
- (g) useful life provisions.

³ For the small non-road engine Rule, the US Standard is the US Code of Federal Regulations Title 40, Chapter I, Subchapter U, Part 1054 – *Control of Emissions from New, Small Non-road Spark-Ignition Engines and Equipment*

⁴ For the marine engine Rule, the US standard is the US Code of Federal Regulations Title 40, Chapter I, Subchapter U, Part 1045 – *Control of Emissions from Spark-Ignition Propulsion Marine Engines and Vessels*

⁵ US Code of Federal Regulations Title 40 Chapter I, Subchapter U, Part 1065 - *Engine-Testing Procedures*

The Department would normally be satisfied that the test facility has this capability if:

- the test facility is ILAC⁶ accredited to ISO/IEC 17025:2005⁷ (or later), and
- the test facility's equipment used for the testing, including the calibration processes, complies with the requirements of US CFR Part 1065.

Where a test facility does not meet these requirements, the Department may commission independent analysis to confirm that the test facility has the capability to undertake the testing to the required standard. A higher certification fee level would apply in this case, as outlined below and in **Appendix 2**.

Submitting an Application

To apply for Australian certification, applicants⁸ will need to submit engine emissions test results and other identifying data regarding the engine to the Department. Separate applications will be required for each engine (or engine family, if applicable).

The Department will use the information supplied by the applicant to assess the eligibility for Australian certification in accordance with the Rules. **Appendix 3** outlines the type of information applicants may be asked to provide.

The required information would be submitted through the online portal in a standardised form. The Department will require a copy of the full engine emissions test report and, if applicable, a scanned copy of the test facility's ILAC Certificate of Accreditation (including the scope of the accreditation) as attachments to the application.

Where the test facility does not have ILAC accreditation, the Department will request additional information regarding the test facility, including any other accreditation the facility may have.

Appendix 4 provides an indication of the information that manufacturers and importers may be asked to provide.

Payment of Fees

Applicants seeking to obtain Australian certification will be required to pay a fee for the assessment of each certification application undertaken by the Department. The requirement to pay a fee is consistent with the Australian Government's policies⁹ regarding cost recovery for the administration of legislation.

Applicants will be required to pay the appropriate fee at the time of lodging an Australian certification application. The Department will not commence assessment of applications until the fee is paid and confirmed by the Department. A fee will be required to be paid for each application made.

⁶ ILAC = International Laboratory Accreditation Cooperation (see <http://ilac.org/>)

⁷ ISO/IEC 17025 *General requirements for the competence of testing and calibration laboratories*

⁸ Where a third party agent is used to make a submission on behalf of a manufacturer or importer, the manufacturer or importer will need to authorise the agent in writing. The agent will need to include a copy of this authorisation with the application. The Department will provide a template on the online portal which can be used to draft an authorisation letter for agents.

⁹ Refer to the Australian Government Charging Framework (see <https://www.finance.gov.au/resource-management/charging-framework/>)

There are two levels of Australian certification fees being considered under the cost recovery arrangements for the NRSIEE emissions standards. These are linked to the accreditation status of the test facility being used by the applicant. GST is not payable on the certification application fee. The proposed fee levels are listed in the table below.

Charge title	Rate
1. Certification application (ILAC-accredited lab testing)	\$1,330
2. Certification application (non-ILAC-accredited lab testing)	\$5,220

Further details are provided in **Appendix 1**.

Assessment of Applications

Once the Australian certification application form is received by the Department and fee payment confirmed, the data from the online portal form will be held in the Department's database. All data will be held confidentially with restricted access granted only to departmental staff administering the NRSIEE emissions standards.

ILAC-accredited testing

Where testing was conducted in an ILAC accredited facility, the application, test report and certificate of accreditation would usually provide sufficient information to enable the Department to make a decision as to whether the engine (and engine family, if applicable) complies with the requirements of the Rule. In the case of any uncertainty, the Department may seek further information from the applicant.

Non-ILAC-accredited testing

Where the test facility does not have ILAC accreditation, the Department may seek additional documentation to allow the test facility to be independently assessed. The Department is proposing to establish a panel of technical experts who can conduct an independent analysis of the capabilities of test facilities to meet the requirements set out in the Rules. The technical expert panel will be established through an open tender process inviting all businesses that satisfy the conditions for participation to submit tenders.

Timing of assessments

Once the Department has confirmed the fee payment has been received the assessment period will commence.

The Department is considering an assessment period of around 30 business day for applications where all required information has been provided and testing has been conducted by an ILAC-accredited facility. Where further information is requested from an applicant, or independent analysis is required, the assessment period will be longer.

Applicants will be able to log into the online portal to view the status of their application(s).

Notification

The Department will notify the applicant of the outcome of the assessment.

Certificate of Conformity granted

Where an application is approved, the Department would issue an Australian Certificate of Conformity for the engine (and engine family, if applicable). The Department is proposing publish the Australian Certificate of Conformity and to list the details, including engine emissions test results, of all engines approved on the Department's website, including any conditions set by the certificate.

Once an Australian Certificate of Conformity is obtained, engines produced in conformity with the approved engine (or engine family, if applicable) covered by the certificate may be imported into Australia and supplied to the Australian market, provided they are labelled according to the marking provisions set out in the Rules. Manufacturers are required to implement quality assurance processes in the production of certified engines to ensure that engines supplied to the market comply with the standards.

Certificate of Conformity not granted

Where an application is not approved, the Department would advise the applicant as to the nature of the non-compliance and, if appropriate, what steps may be required to remedy the situation.

Exemption from Australian certification requirements

The Rules will provide for some exemptions to the emissions standards to cater for specific business needs and in limited circumstances where compliance with the standards is not practical. Any exemptions that are approved will include a range of conditions which may include sale restrictions, storage requirements, usage restrictions and reporting requirements to ensure that the applicable products are used as intended. Applications for exemptions would be made through the Department's online portal.

Where an exemption is granted the applicant will be issued with an exemption number which is used for verification purposes at the point of import. Exemption numbers can only be used in conjunction with the specified exempt products.

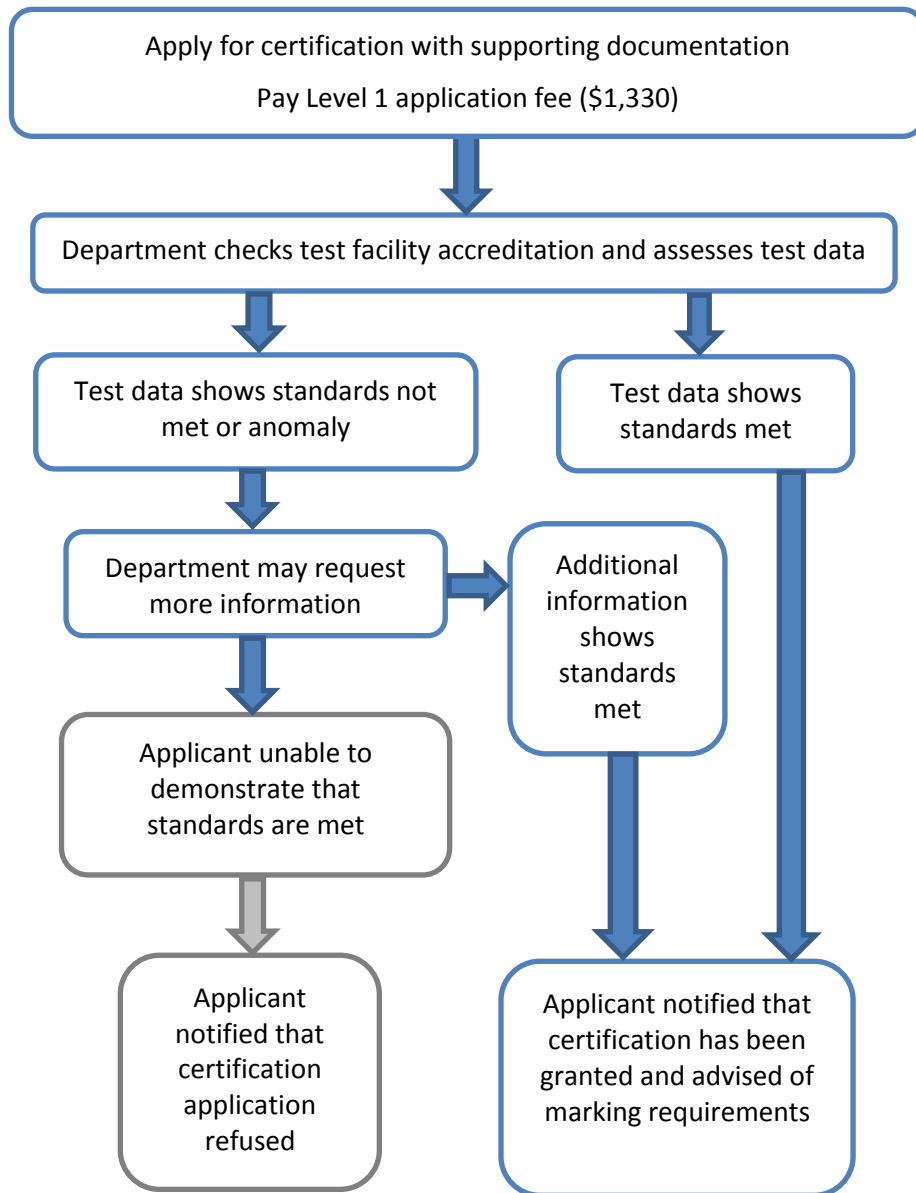
The proposed exemption categories and associated fees are listed in the table below.

Exemption Category	Fee
1. For testing, evaluation and display (not for sale in Australia)	\$390
2. For National Security purposes	\$550
3. For re-export (not for sale in Australia), for use by recognized rescue or emergency services,* replacement engines*, competition engines*	\$1,470

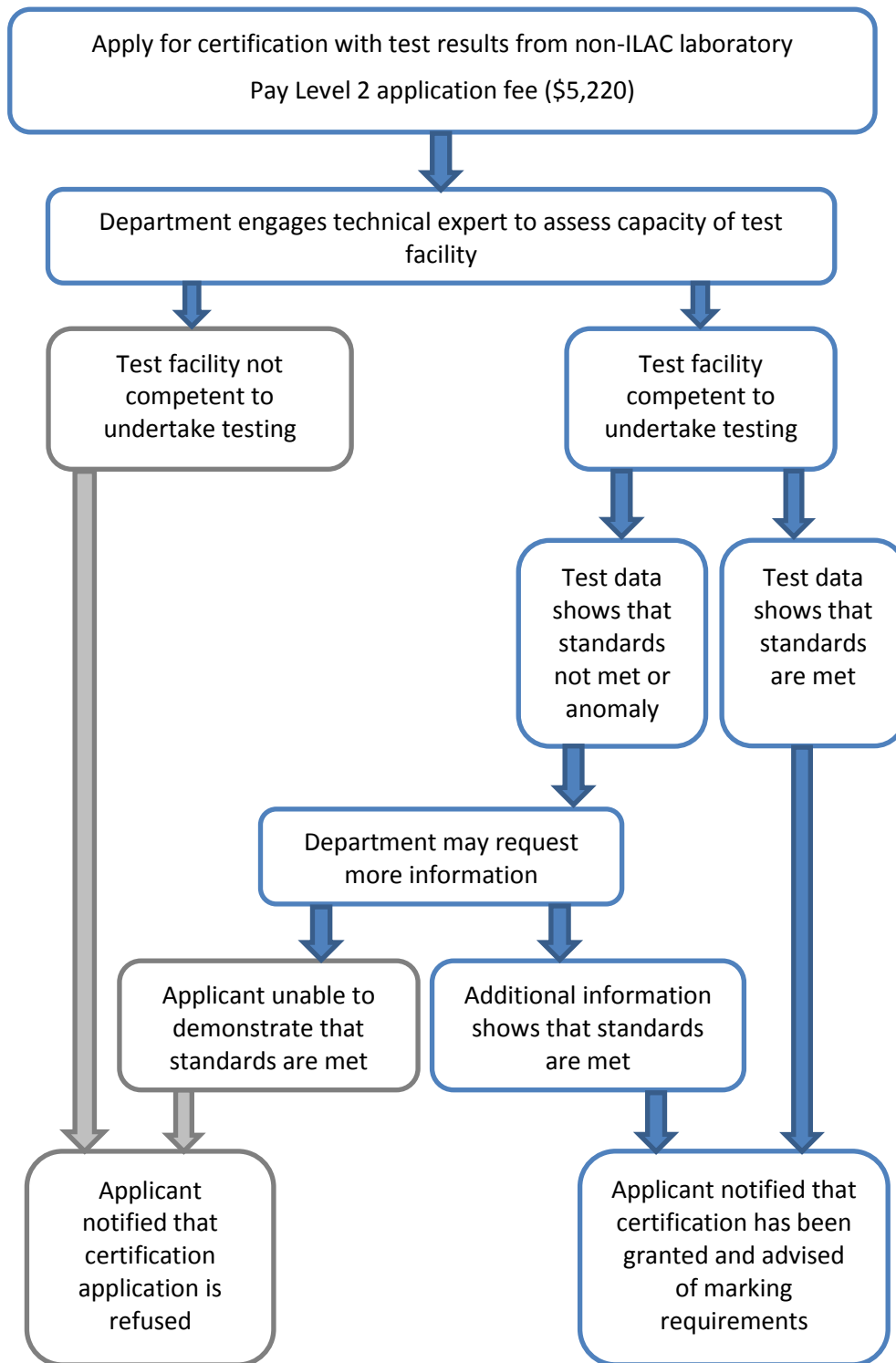
* Exemptions would only be available where there is no compliant alternative.

Appendix 1 – Certification application and assessment process

Engine testing completed by ILAC-accredited laboratory



Engine testing completed by non-ILAC-accredited laboratory



Appendix 2 - Australian Certification Application Fees

Introduction

Applications for Australian certification are required to pay a fee for the assessment of each certification application undertaken by the Department. Fees will be required to be paid in full at the time of submitting a certification application. The Department will not commence assessment of applications until the fee is paid and confirmed by the Department.

What Fees Apply?

There are two levels of fees Australian certification which are linked to the accreditation status of the test facility used. GST is not payable on the certification application fee.

Level 1 Fee

A fee of \$1,330 would apply if the test facility used to test the engine was, at the time of testing, accredited in accordance with the requirements of *ISO/IEC 17025:2005 (or later) General requirements for the competence of testing and calibration laboratories* and has been assessed and approved by a signatory to the ILAC Mutual Recognition Arrangement as being competent to undertake the testing specified in US CFR 1065.

To be eligible for this lower fee, applicants for Australian certification must be able to answer 'Yes' to the following questions:

- Q1. Is the test facility used for testing the engines for which you are seeking certification, accredited to *ISO/IEC 17025:2005 (or later)*?
- Q.2 If requested, can you provide the full name and country of origin of the ILAC signatory?
- Q.3 If requested, can you provide a copy of the certificate of accreditation issued by the ILAC signatory for this facility?
- Q.4 Was the ILAC accreditation valid at the time the engines concerned were tested?
- Q.5 Does the scope of the certificate of accreditation issued by the ILAC signatory include the testing of engines of the type covered by this certification application? (Refer to **Appendix 2i** for description of engines.)
- Q.6 Does the scope of the certificate of accreditation issued by the ILAC signatory include testing to those requirements and procedures of CFR 1065 which are applicable to the tested engine type?

Where the answer is 'No' to any of the above questions, the higher Level 2 fee will be applied.

Level 2 Fee

A higher assessment fee of \$5,220 reflects the costs associated with the Department commissioning an independent analysis of the capabilities of the test facility to undertake engine testing to requirements specified in the Rules.

Appendix 2i – Description of Engine Categories

Marine Engines

The certificate of accreditation issued by the ILAC signatory to a testing facility should include coverage to test emissions from the following six categories of marine engines:

Category	Engine Description	Maximum Engine Power (P) (kW)
1	Outboard and Personal Watercraft	$P \leq 4.3$
2	Outboard and Personal Watercraft	$4.3 < P \leq 40$
3	Outboard and Personal Watercraft	$P > 40$
4	Sterndrive and Inboard (Conventional)	$P \leq 373$
5	Sterndrive and Inboard (High Performance)	$P \leq 485$
6	Sterndrive and Inboard (High Performance)	$P > 485$

Non-Road Engines

The certificate of accreditation issued by the ILAC signatory to a testing facility should include coverage to test emissions from the following five categories of small non-road engines:

Category	Engine Description	Engine Displacement Class
1	Non-handheld	Class I
2	Non-handheld	Class II
3	Handheld	Class III
4	Handheld	Class IV
5	Handheld	Class V

Appendix 3 – Summary of Information and Data Required

This appendix outlines the information and data that applicants may be required to provide via the online portal to allow for applications for Australian certification to be assessed by the Department

Manufacturer Details

Information requested may include the following:

- unique manufacturer ID allocated during the registration process
- current contact details for the application
- third party agent authorization (where applicable).

Test Facility Details

Information requested may include the following:

- test facility name
- test facility address
- registered owner of test facility
- ABN or ACN (Australian companies)
- company registration number (non-Australian companies)
- country of registration
- contact name and company position
- contact phone number (including area code and country code, if applicable)
- contact email.

Test Facility Standards and Accreditation

The following confirmations may be requested:

- that the test facility is ILAC accredited to ISO/IEC 17025:2005 (or later)
- that the test facility's equipment used for the testing, including the calibration processes, complies with the requirements of CFR Part 1065.

Where the test facility does not have the appropriate ILAC accreditation to ISO 17025:2005 (or later), additional information and documentation will be required to enable the Department to obtain independent technical expert assessment of the facility's capacity to undertake the testing specified in CFR 1065 (including quality assurance systems, equipment specifications and calibration procedures). Refer to **Appendix 4** for an indication of the information that may be requested.

Test Report Details and Confirmation Statement

Information requested may include the following:

- test facility's test report reference number

- test report date
- confirmation that all the testing reported in the application form has been conducted in accordance with the US CFR testing requirements called up in the Rules

Tested Engine Details

Information requested may include the following:

- engine make
- engine model name/number
- engine type by cycle
- production plant location
- engine type by equipment function (handheld / non-handheld for non-road rule; outboard / personal watercraft / sterndrive / inboard for marine rule)
- engine displacement (cc)
- engine displacement class (I-V) (for non-road rule)
- maximum engine power (kW)
- maximum engine test speed (rpm)
- whether the engine is a high performance engine (sterndrive or inboard) as defined in CFR part 1045.801 (for marine rule)
- whether the engine's exhaust is fitted with a catalyst or other exhaust after treatment
- whether the engine is a marine generator engine as defined in CFR part 1054.801 (for non-road rule)
- engine fuel type
- the standard that the test fuel meets.

Engine Family Details (if applicable)

Where seeking certification for an engine family based on the results from the test engine, the following information may be requested:

- confirmation that the test results from the test engine covered by this application are being presented as representative of an engine family
- the model names/numbers of all the engines in the engine family
- confirmation that the engines have been aggregated into the engine family in a manner which complies with the requirements of CFR Part 1054.230 (for non-road rule) or CFR Part 1045.230 (for marine rule)
- confirmation that the test engine for the engine family been selected in accordance with the requirements of CFR Part 1054.235(a) (for non-road rule) or CFR Part 1045.235(a) (for marine rule).

Deterioration Factors

Information requested may include the following:

- how the deterioration factors were determined
- the deterioration factor for CO¹⁰
- the deterioration factor for HC+NOx¹¹.

Regulated Emissions Results

In accordance with the requirements of the relevant CFR (Part 1054 for non-road Rule and Part 1045 for marine Rule) the applicant may be asked to provide the measured emissions results for HC+NOx and CO from the test engine and the calculated final emissions results (after application of the deterioration factor/s).

Other Emissions Results

In accordance with the requirements of the relevant CFR (Part 1054 for non-road Rule and Part 1045 for marine Rule) the applicant may be asked to provide the measured final emissions results for CO₂, N₂O (if applicable) and CH₄.

Useful Life and Defeat Devices

The following confirmations may be requested:

- the engine's useful life has been determined in accordance with CFR Part 1054.107 (non-road rule) or for the marine rule, CFR Part 1045.103(e) or CFR Part 1045.105(e), as applicable
- based on the testing conducted, that the engine will meet the applicable emissions standards over their full useful life
- the engine is not fitted with a defeat device
- the engine complies with the not-to-exceed emission standards as specified in CFR Part 1045.107 (for marine rule).

Sample Label/Marking

The applicant will be asked to attach a sample of the label or marking that will be applied to the engine or engine family in production, to demonstrate that it meets the marking requirements of the Rules.

Declaration

The applicant may be asked to make a declaration that the information provided is true, accurate and complete to the best of their knowledge.

¹⁰ CO = carbon monoxide

¹¹ HC = hydrocarbon, NOx = nitrogen oxide

Appendix 4 – Additional Documentation (non-ILAC Accredited Facilities)

Where the test facility engaged to test an engine is not ILAC accredited, the Department may ask for additional information regarding the test facility, including any other accreditation it may have. This would allow the Department to commission an independent capability assessment of the test facility.

While the details of what may be required may vary, applicants could be expected to provide the following set of documents:

- the full test report for the engine, including specifications of test fuels
- a list and specifications of all the equipment used to set up and conduct the tests required for the engine under CFR 1065, including the sampling and measurement of the emissions
- a summary of calibration procedures applied to the equipment used in the testing of the engine
- confirmation of US EPA approval for any alternate procedures (where applicable) used in the testing of the engine in accordance with Subparts 1065.10 and 1065.12
- details of any independent accreditation of the test facility
- the qualifications of staff involved in testing the engine and calibration of equipment
- a copy of the test facility's quality system documentation such as a quality assurance manual or plan
- examples of previous experience with testing similar engines to CFR 1065 or comparable standards.