

APPENDIX A: MANUFACTURER STANDARDS AND TEST PROCEDURES
Part 4

Proposed Regulation Order Part 4: Adoption of incorporated “California Exhaust and Standards and Test Procedures for New 2007 through 2009 Off-Road Large Spark-Ignition Engines” (40 CFR, Part 1048)

State of California
AIR RESOURCES BOARD

PROPOSED CALIFORNIA EXHAUST AND EVAPORATIVE EMISSION STANDARDS
AND TEST PROCEDURES FOR NEW 2010 AND LATER OFF-ROAD LARGE
SPARK-IGNITION ENGINES

PART 1: 2007 - 2009 Emission Standards

Adopted: [insert date of adoption]

NOTE: This document incorporates by reference Title 40, Code of Federal Regulations (CFR), Part 1048 – **CONTROL OF EMISSIONS FROM NEW, LARGE NONROAD SPARK-IGNITION ENGINES**, Subparts A, B, C, D, F, G, H, and I, including Appendix I and II to Part 1048 as amended on July 13, 2005 (Federal Register, Volume 70, pages 40465 through 40486), and the internally referenced subparts of 40 CFR Part 86, 40 CFR Part 1065, and 40 CFR Part 1068. Sections that have been included in their entirety are set forth with the section number and title. California provisions that replace specific federal provisions are denoted by the words “DELETE” for the federal language and “REPLACE WITH” or “ADD” for the California regulations. The symbols “* * * * *” and “...” mean that the remainder of the CFR text for a specific section, which is not shown in these regulations, has been included by reference, with only the printed text changed. Federal regulations that are not listed are not part of the California regulations. Text in *Italics* is provided as rationale for replacement language.

This document is all newly adopted text. [*The italicized text in brackets describes the purpose of the California provisions.*]

PART 1048 – CONTROL OF EMISSIONS FROM NEW, LARGE NONROAD SPARK-IGNITION ENGINES

Subpart A—Overview and Applicability

§1048.1 Does this part apply to me?

* * * * *

This part 1048 applies for engines built from January 1, 2007 through December 31, 2009. You need not follow this part for engines you produce before January 1, 2007. See §1048.101 through 1048.115, and the definition of model year in §1048.801 for more information about the timing of new requirements.

[Applicability is changed to reflect an end date of December 31, 2009 to coincide with the introduction of the 0.8 g/kW-hr standard on January 1, 2010. Additionally, the reference to §1048.145 is removed because that section has been deleted; see §1048.145 for deletion rationale.]

* * * * *

(d) DELETE AND REPLACE WITH:

Engines with a maximum engine power at or below 19 kW are covered by Title 13, California Code of Regulations, Chapter 9, Article 1, Small Off-Road Engines

[The language was changed to reference appropriate California standards for Small Off-Road Engines, which are more stringent than the EPA standards.]

§1048.5 Which engines are excluded from this part's requirements?

This part does not apply to the following nonroad engines:

(a) DELETE AND REPLACE WITH:

Engines that are subject to the requirements of Title 13, California Code of Regulations, Chapter 9, Article 3, Off-Highway Recreational Vehicles and Engines, including any related provisions and guidelines that are applicable to Off-Highway Recreational Vehicles and Engines.

[The language was changed to reference appropriate ARB regulations for Off-Highway Recreational Vehicles and Engines]

(b) DELETE AND REPLACE WITH:

Propulsion marine engines. See Title 13, California Code of Regulations, Chapter 9, Article 4.7, Spark-Ignition Marine Engines. This part applies with respect to auxiliary marine engines.

[The language was changed to reference appropriate ARB regulations for Marine Engines]

§1048.10 How is this part organized?

§1048.15 Do any other regulation parts affect me?

* * * * *

(b)(6) DELETE AND REPLACE WITH:
Procedures for In-Use Engine Recalls for Large Off-Road Spark-Ignition Engines with an Engine Displacement Greater Than 1.0 Liter, Chapter 9, Article 4.5, section 2439, Title 13, California Code of Regulations

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(b)(7) DELETE AND REPLACE WITH:
Administrative Procedures – Hearings, Subchapter 1, Article 1, Sections 60040 – 60094, Title 17, California Code of Regulations

* * * * *

(b)(8) ADD
Large Spark-Ignition (LSI) Engine Fleet Requirements, Chapter 15, Article 2, sections 2775, 2775.1, and 2775.2, Title 13, California Code of Regulations

§1048.20 What requirements from this part apply to excluded stationary engines?

Subpart B—Emission Standards and Related Requirements

§1048.101 What exhaust emission standards must my engines meet?

* * * * *

(e) Fuel types. DELETE AND REPLACE WITH:
Fuel types (a)

* * * * *

ADD

(b) Test Fuel.
(a) (1) If the engine is a gasoline-fueled large spark-ignition engine, then the test fuel used shall be consistent with the fuel specifications as outlined in the " The "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model

Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as of January 1, 2006 (last amended August 4, 2005) incorporated by reference in Section 1961(d), Title 13, CCR). The California fuel specifications are contained in the California Code of Regulations, Title 13, Chapter 5, Article 1, Sections 2260-2272. If the engine is tested using the U.S. EPA test fuel, consistent with the fuel specifications as outlined in Title 40 Code of Federal Register, Part 1065, subpart H, the manufacturer shall demonstrate that the emission test results complies with these Test Procedures.

(2) If the engine is not a gasoline-fueled large spark-ignition engine, then the test fuel used shall be consistent with the fuel specifications as outlined in the "California Exhaust Emission Standards and Test Procedures for 2001 and Subsequent Model Passenger Cars, Light-Duty Trucks, and Medium-Duty Vehicles," as of January 1, 2006 (last amended August 4, 2005) incorporated by reference in Section 1961(d), Title 13, CCR). The California fuel specifications are contained in the California Code of Regulations, Title 13, Chapter 5, Article 3, Sections 2290- 2293.5. If the engine is tested using the U.S. EPA test fuel, consistent with the fuel specifications as outlined in Title 40 Code of Federal Register, Part 1065, subpart H, the manufacturer shall demonstrate that the emission test results complies with these Test Procedures.

(b) During all engine tests, the engine shall employ a lubricating oil consistent with the engine manufacturer's specifications for that particular engine. These specifications shall be recorded and declared in the certification application.

(f) DELETE AND REPLACE WITH:

Small engines. Engines with total displacement at or below 1000 cc may comply with the requirements of Title 13, California Code of Regulations, Chapter 9, Article 1, Small Off-Road Engines and Chapter 15, Article 1, Evaporative Emission Requirements for Off-Road Equipment instead of complying with the requirements of this part, as described in §1048.615.

[The language was changed to reference appropriate California standards for Small Off-Road Engines, which are more stringent than the EPA standards.]

* * * * *

§1048.105 What evaporative emission standards and requirements apply?

§1048.110 How must my engines diagnose malfunctions?

§1048.115 What other requirements must my engines meet?

Engines subject to this part must meet the following requirements:

(a) DELETE AND REPLACE WITH:

Crankcase emissions. No crankcase emissions shall be discharged directly into the ambient atmosphere from any new 2001 or later engines subject to the provisions of this part.

[The EPA allows crankcase emissions to be added to the exhaust. This is inconsistent with the existing LSI regulation and ARB policy.]

* * * * *

§1048.120 What emission-related warranty requirements apply to me?

§1048.125 What maintenance instructions must I give to buyers?

§1048.130 What installation instructions must I give to equipment manufacturers?

§1048.135 How must I label and identify the engines I produce?

§1048.140 What are the provisions for certifying Blue Sky Series engines?

§1048.145 Are there interim provisions that apply only for a limited time?

(a) DELETE

[§1048.145 allows for the generation of offset credits. This is inconsistent with current ARB policy and has been deleted.]

Subpart C—Certifying Engine Families

§1048.201 What are the general requirements for obtaining a certificate of conformity?

§1048.205 What must I include in my application?

* * * * *

(aa) DELETE AND REPLACE WITH:

Name an agent for service of process located in the United States. Service on this agent constitutes service on you or any of your officers or employees for any action by the California Air Resources Board.

[The revised language provides the ARB the ability to serve process]

§1048.210 May I get preliminary approval before I complete my application?

§1048.220 How do I amend the maintenance instructions in my application?

§1048.225 How do I amend my application for certification to include new or modified engines?

§1048.230 How do I select engine families?

* * * * *

(f) DELETE

[The language has been deleted as the current LSI program and ARB policy does not allow manufacturers to divide engine families into subfamilies with multiple standards.]

§1048.235 What emission testing must I perform for my application for a certificate of conformity?

§1048.240 How do I demonstrate that my engine family complies with exhaust emission standards?

§1048.245 How do I demonstrate that my engine family complies with evaporative emission standards?

§1048.250 What records must I keep and make available to ARB?

* * * * *

(e) ADDED

Maintain certification engines for a period of two years

[ARB policy, as expressed in other motor vehicle regulations, requires engine manufacturers to maintain certification engines for a specified period.]

§1048.255 When may EPA deny, revoke, or void my certificate of conformity?

Subpart D—Testing Production-line Engines

§1048.301 When must I test my production-line engines?

§1048.305 How must I prepare and test my production-line engines?

§1048.310 How must I select engines for production-line testing?

§1048.315 How do I know when my engine family fails the production-line testing requirements?

§1048.320 What happens if one of my production-line engines fails to meet emission standards?

§1048.325 What happens if an engine family fails the production-line requirements?

§1048.330 May I sell engines from an engine family with a suspended certificate of conformity?

§1048.335 How do I ask EPA to reinstate my suspended certificate?

§1048.340 When may EPA revoke my certificate under this subpart and how may I sell these engines again?

§1048.345 What production-line testing records must I send to EPA?

§1048.350 What records must I keep?

Subpart E—Testing In-use Engines

§1048.401 What testing requirements apply to my engines that have gone into service?

* * * * *

(b) We may approve an alternate plan for showing that in-use engines comply with the requirements of this part if one of the following is true:

(1) DELETE AND REPLACE WITH:

You produce a total of less than 2000 large spark-ignition engines annually for sale in the United States of America.

[The language has been revised to make the definition for small volume manufacturer definition consistent with other ARB regulations.]

* * * * *

§1048.405 How does this program work?

DELETE

[Replaced by 2438 language in §1048.410]

§1048.410 How must I select, prepare, and test my in-use engines?

DELETE AND REPLACE WITH:

(a) This section applies to new 2010 and later model year off-road large spark-ignition engines with engine displacement greater than 1.0 liter.

(b) Manufacturer In-Use Testing Program.

Standards and Test Procedures. The emission standards, exhaust sampling and analytical procedures are those described in the Test Procedures, and are applicable to engines tested only for exhaust emissions. An engine is in compliance with these standards and test procedures only when all portions of these in-use test procedures and specified requirements from the Test Procedures are fulfilled, except that any adjustable engine parameters must be set to the nominal value or position as indicated on the engine label.

(1) Within a manufacturer's model-year engine production period, the ARB will identify those engine families, and the specific configurations within an engine family, that the manufacturer must subject to in-use testing as described below. For each model year, ARB may identify a number of engine families that is no greater than 25 percent of the number of engine families to which this article is applicable. For those manufacturers producing three or less engine families in a model year, ARB may designate a maximum of one engine family per model year for in-use testing.

(2) For each engine family identified by ARB, engine manufacturers must perform emission testing of an appropriate sample of in-use engines from each engine family. Manufacturers must submit data from this in-use testing to ARB.

(3) An engine manufacturer must test in-use engines from each engine family identified by ARB. All engines selected by the manufacturer for testing must be identified by the manufacturer, and a list of the selected engines must be submitted to the Executive Officer, prior to the onset of testing. Engines to be tested must have accumulated a minimum of 0.50 (50 percent) of the family's certified useful life period. The number of engines to be tested by a manufacturer will be determined by the following method:

(A) a minimum of four engines per family, provided that no engine fails any emission standard. For each exceedance, two additional engines must be tested until the total number of engines equals ten.

(B) For engine families of less than 500 engines (national production) for the identified model year or for engine manufacturers who make less than or equal to 2,000 engines nationally for that model year, a minimum of two (2) engines per family provided that no engine fails any emission standard. For each failing engine, two more engines shall be tested until the total number of engines equals ten (10).

(C) If an engine family was certified using carryover emission data and has been previously tested under paragraphs (b)(3)(A) or (b)(3)(B) of this section (and a recall for that family has not occurred), then only one engine for that family must be tested. If that one engine fails any emission standard, testing must be conducted as outlined in subsections (b)(3)(A) or (b)(3)(B), whichever is appropriate.

(4) The Executive Officer may approve an alternative to manufacturer in-use testing, where:

(A) Engine family production is less than or equal to 200 per year, nationally;

(B) Engines cannot be obtained for testing because they are used substantially in vehicles or equipment that are not conducive to engine removal such as large vehicles or equipment from which the engine cannot be removed without dismantling either the engine, vehicle, or equipment; or

(C) Other compelling circumstances associated with the structure of the industry and uniqueness of engine applications. Such alternatives shall be designed to determine whether the engine family is in compliance.

(5) The engine manufacturer shall procure in-use engines which have been operated between 0.50 and 1.0 times the certified engine's useful life period. The engine manufacturer may test engines from more than one model year in a given year. The manufacturer shall submit a plan for testing within twelve calendar months after receiving notice that ARB has identified a particular engine family for testing and shall complete testing of such engine family within 24 calendar months from the date of approval of the plan by ARB. Test engines may be procured from sources associated with the engine manufacturer (i.e., manufacturer-established fleet engines, etc.) or from sources not associated with the manufacturer (i.e., consumer-owned engines, independently owned fleet engines, etc.).

(c) Maintenance, procurement and testing of in-use engines.

(1) A test engine must have a maintenance and use history representative of in-use conditions.

(A) To comply with this requirement a manufacturer must obtain information from the end users regarding the accumulated usage, maintenance, repairs, operating conditions, and storage of the test engines.

(B) Documents used in the procurement process must be maintained as required.

(2) The manufacturer may perform minimal restorative maintenance on components of a test engine that are not subject to parameter adjustment. Maintenance may include only that which is listed in the owner's instructions for engines with the amount of service and age of the acquired test engine. Repairs may be performed on a test engine with prior Executive Officer approval. Documentation of all maintenance, repairs, defects, and adjustments shall be maintained and retained as required.

(3) At least one valid emission test, according to the Test Procedure, is required for each in-use engine.

(4) The Executive Officer may waive portions or requirements of the test procedure, if any, that are not necessary to determine in-use compliance.

(5) If a selected in-use engine fails to comply with any applicable emission standards, the manufacturer shall determine the reason for noncompliance. The manufacturer must report within 72 hours after the completion of the test specifying the emission results and identifying the pollutant which failed to comply with the emission standard. The manufacturer must report all such reasons of noncompliance within fifteen business days of completion of testing. Additional time beyond the initial fifteen days may be granted providing that the manufacturer receives prior approval from the Executive Officer. The reports may be filed electronically or mailed to the following address: Chief of Mobile Source Operations Division, 9528 Telstar Avenue, El Monte, CA 91731.

(6) At the discretion of the Executive Officer, an engine manufacturer may test more engines than the minima described in paragraph (b)(3) of this section or may concede failure before testing a total of ten engines. Upon conceding failure the manufacturer shall proceed with a voluntary recall program as specified in Section 2439.

(7) The Executive Officer will consider failure rates, average emission levels and the existence of any defects, among other factors, in determining whether to pursue remedial action under this subpart. The Executive Officer may order a recall pursuant to Section 2439 before testing reaches the tenth engine whenever the Executive Officer has determined, based on production-line test results or in-use test results, enforcement testing results, or any other information, that a substantial number of a class or category of equipment or engines produced by that manufacturer, although properly maintained and used, contain a failure in an emission-related component which, if uncorrected, may result in the equipments' or engines' failure to meet applicable standards over their useful lives; or whenever a class or category of equipment or engines within their useful lives, on average, do not conform to the emission standards prescribed pursuant to Part 5 (commencing with Section 43000) of Division 26 of the Health and Safety Code, or any regulation adopted by the state board pursuant thereto, other than an emissions standard applied to new engines to determine "certification" as specified in Chapter 9, as applicable to the model year of such equipment or engines.

(8) Prior to an ARB-ordered recall, the manufacturer may perform a voluntary emissions recall pursuant to Article 4.5, Section 2439(b). Such manufacturer is subject to the reporting requirements in subsection (d) below.

(9) Once ARB determines that a substantial number of engines fail to conform with the requirements, the manufacturer will not have the option of a voluntary emissions recall.

(d) In-use test program reporting requirements.

(1) The manufacturer shall electronically submit to the Executive Officer within three months of completion of testing all emission testing results generated from the in-use testing program. The following information must be reported for each test engine:

- (A) engine family,
- (B) model,
- (C) engine serial number or alternate identification, as applicable,
- (D) date of manufacture,
- (E) estimated hours of use,
- (F) date and time of each test attempt,
- (G) results (if any) of each test attempt,
- (H) results of all emission testing,
- (I) summary of all maintenance, repairs, and adjustments performed,
- (J) summary (if any) of all ARB pre-approved modifications and repairs,
- (K) determinations of noncompliance or compliance.

(2) The manufacturer must electronically submit the results of its in-use testing with a pre-approved information heading. The Executive Officer may exempt manufacturers from this requirement upon written request with supporting justification.

(3) All testing reports and requests for approvals made under this subpart shall be sent to the Executive Officer.

(4) The Executive Officer may require modifications to a manufacturer's in-use testing programs.

[All sections referring to in-use compliance have been replaced with existing the ARB program. The ARB in-use compliance program provides greater assurance that engines will maintain their emissions during their useful life.]

§1048.415 What happens if in-use engines do not meet requirements?

DELETE AND REPLACE WITH:

Procedures for In-Use Engine Recalls for Large Off-Road Spark-Ignition Engines with an Engine Displacement Greater Than 1.0 Liter.

(a) The recall procedures in this section apply as set forth in Title 13, California Code of Regulations, Sections 2433 and 2438.

(b) Voluntary Emissions Recall

(1) When any manufacturer initiates a voluntary emission recall, the manufacturer shall notify the Executive Officer of the recall at least 30 days before owner notification is to begin. The manufacturer shall also submit to the Executive Officer a voluntary recall plan for approval, as prescribed in the following:

(A)(i) a description of each class or category of engines to recall, including the number of engines to be recalled, the engine family or a sub-group thereof, the model year, and such other information as may be required to identify the engines:

(ii) a description of the specific modifications, alterations, repairs, corrections, adjustments, or other changes to be made to correct the engines affected by the nonconformity;

(iii) a description of the method by which the manufacturer will notify engine owners including copies of any letters of notification to be sent to engine owners;

(iv) a description of the proper maintenance or use, if any, upon which the manufacturer conditions eligibility for repair under the recall plan, and a description of the proof to be required of an engine owner to demonstrate compliance with any such conditions;

(v) a description of the procedure to be followed by engine owners to obtain correction of the nonconformity. This shall include designation of the date on or after which the owner can have the nonconformity remedied, the time reasonably necessary to perform the labor to remedy the nonconformity, and the designation of facilities at which the nonconformity can be remedied;

(vi) a description of the class of persons other than dealers and authorized warranty agents of the manufacturer who will remedy the nonconformity;

(vii) a description of the system by which the manufacturer will assure that an adequate supply of parts is available to perform the repair under the plan; or

(B)(i) a description of each class or category of engines subject to recall, including the number of engines subject to being recalled, the engine family or a sub-group thereof, the model year, and such other information as may be required to identify the engines;

(ii) a description of the method by which the manufacturer will use the in-use emissions credit, averaging, banking, and trading program, as described in Section 2438(e), to remedy the nonconformity.

(2) Voluntary Recall Progress Report. A manufacturer who initiates a voluntary emission recall campaign pursuant to paragraph (b)(1)(A) of this section must submit at least one report on the progress of the recall campaign. This report shall be submitted to the Executive Officer by the end of the fifth quarter, as defined in Section 2112(j), Chapter

2, Title 13 of the California Code of Regulations, following the quarter in which the notification of equipment or engine owners was initiated, and include the following information:

- (A) Engine family involved and recall campaign number as designated by the manufacturer.
 - (B) Date owner notification was begun, and date completed.
 - (C) Number of equipment or engines involved in the recall campaign.
 - (D) Number of equipment or engines known or estimated to be affected by the nonconformity.
 - (E) Number of equipment or engines inspected pursuant to the recall plan and found to be affected by the nonconformity.
 - (F) Number of inspected equipment or engines.
 - (G) Number of equipment or engines receiving repair under the recall plan.
 - (H) Number of equipment or engines determined to be unavailable for inspection or repair under the recall plan due to exportation, theft, scrapping, or for other reasons (specify).
 - (I) Number of equipment or engines determined to be ineligible for recall action due to removed or altered components.
 - (J) A listing of the identification numbers of equipment or engines subject to recall but for whose repair the manufacturer has not been invoiced. This listing shall be supplied in a standardized computer data storage device to be specified by the Executive Officer.
 - (K) Any service bulletins transmitted to dealers which relate to the nonconformity and which have not previously been submitted.
 - (L) All communications transmitted to equipment or engine owners which relate to the nonconformity and which have not previously been submitted.
- (3) The information gathered by the manufacturer to compile the reports must be retained for not less than seven years from the date of the manufacture of the engines and must be made available to the Executive Officer or designee of the Executive Officer upon request.
- (4) A voluntary recall plan shall be deemed approved unless disapproved by the Executive Officer within 20 business days after receipt of the recall plan.

(5) Under a voluntary recall program, initiated and conducted by a manufacturer or its agent or representative as a result of in-use enforcement testing or other evidence of noncompliance provided or required by the Board to remedy any nonconformity, the capture rate shall be at a minimum 55 percent of the equipment or engine within the subject engine family or a sub-group thereof. The manufacturer shall comply with the capture rate by the end of the fifth quarter, as defined in Section 2112(j), Chapter 2, Title 13 of the California Code of Regulations, following the quarter in which the notification of equipment or engine owners was initiated. If the manufacturer cannot correct the percentage of equipment specified in the plan by the applicable deadlines, the manufacturer must use good faith efforts through other measures, subject to approval by the Executive Officer, to bring the engine family into compliance with the standards. If the Executive Officer does not approve the manufacturer's efforts, the manufacturer shall propose mitigation measures to offset the emissions of the unrepaired equipment within 45 days from the last report filed pursuant to paragraph (b)(2), above. The Executive Officer shall approve such measures provided that:

(A) The emission reductions from the recalled and repaired equipment or engines and the mitigation measures are equivalent to achieving the capture rate; and

(B) The emission reductions from the mitigation measures are real and verifiable; and

(C) The mitigation measures are implemented in a timely manner.

(c) Initiation and Notification of Ordered Emission-Related Recalls.

(1) A manufacturer shall be notified whenever the Executive Officer has determined, based on production-line test results or in-use test results, enforcement testing results, or any other information, that a substantial number of a class or category of equipment or engines produced by that manufacturer, although properly maintained and used, contain a failure in an emission-related component which, if uncorrected, may result in the equipments' or engines' failure to meet applicable standards over their useful lives; or whenever a class or category of equipment or engines within their useful lives, on average, do not conform to the emission standards prescribed pursuant to Part 5 (commencing with Section 43000) of Division 26 of the Health and Safety Code, or any regulation adopted by the state board pursuant thereto, other than an emissions standard applied to new engines to determine "certification" as specified in Chapter 9, as applicable to the model year of such equipment or engines.

(2) It shall be presumed for purposes of this section that an emission-related failure will result in the exceedance of emission standards unless the manufacturer presents evidence in accordance with the procedures set forth in subsections (A), (B), and (C) which demonstrates to the satisfaction of the Executive Officer that the failure will not result in exceedance of emission standards within the useful life of the equipment or engine.

(A) In order to overcome the presumption of noncompliance set forth in paragraph (c)(2) above, the average emissions of the equipment and engines with the failed emission-related component must comply with applicable emission standards. A manufacturer may demonstrate compliance with the emission standards by following the procedures set forth in either paragraphs (c)(2)(B) or (c)(2)(C) of this section.

(B) A manufacturer may test properly maintained in-use equipment with the failed emission-related component pursuant to the applicable certification emission tests specified in Section 2433, Title 13 of the California Code of Regulations. The emissions shall be projected to the end of the equipment's or engine's useful life using in-use deterioration factors. The in-use deterioration factors shall be chosen by the manufacturer from among the following:

(i) "Assigned" in-use deterioration factors provided by the ARB on a manufacturer's conditions; request and based on ARB in-use testing; or,

(ii) deterioration factors generated during certification, provided adjustments are made to account for equipment aging, customer hour usage-accumulation practices, type of failed component, component failure mode, effect of the failure on other emission-control components, commercial fuel and lubricant quality, and any other factor which may affect the equipment's or engine's operating or,

(iii) subject to approval by the Executive Officer, a manufacturer-generated deterioration factor. Such deterioration factor must be based on in-use data generated from certification emission tests performed on properly maintained and used equipment in accordance with the procedures set forth in Section 2433 of Title 13 of the California Code of Regulations, and the equipment from which it was derived must be representative of the in-use fleet with regard to emissions performance and equipped with similar emission control technology as equipment with the failed component.

(C) In lieu of the equipment or engine emission testing described in subsection (B) above and subject to approval by the Executive Officer, a manufacturer may perform an engineering analysis, laboratory testing or bench testing, when appropriate, to demonstrate the effect of the failure.

(3) The notification shall include a description of each class or category of equipment or engines encompassed by the determination of nonconformity, shall set forth the factual basis for the determination and shall designate a date at least 45 business days from the date of receipt of such notification by which the manufacturer shall submit a plan to remedy the nonconformity.

(4) Availability of Public Hearing.

(A) The manufacturer may request a public hearing pursuant to the procedures set forth in Subchapter 1.25, Division 3, Chapter 1, Title 17, California Code of Regulations to contest the finding of nonconformity and the necessity for or the scope of any ordered

corrective action.

(B) If a manufacturer requests a public hearing pursuant to subsection (A) above, and if the Executive Officer's determination of nonconformity is confirmed at the hearing, the manufacturer shall submit the recall plan required by Section 2439 within 30 days after receipt of the Board's decision.

(5) Ordered Recall Plan.

(A) Unless a public hearing is requested by the manufacturer, a recall plan shall be submitted to the Chief, Mobile Source Operations Division, 9528 Telstar Avenue, El Monte, CA 91731, within the time limit specified in the notification. The Executive Officer may grant the manufacturer an extension upon good cause shown.

(B) The recall plan shall contain the following:

(i) A description of each class or category of equipment or engine to be recalled, including the engine family or sub-group thereof, the model-year, the make, the model, and such other information as may be required to identify the equipment or engines to be recalled.

(ii) A description of the nonconformity and the specific modifications, alterations, repairs, corrections, adjustments or other changes to be made to bring the equipment or engines into conformity including a brief summary of the data and technical studies which support the manufacturer's decision regarding the specific corrections to be made.

(iii) A description of the method by which the manufacturer will determine the names and addresses of equipment or engine owners and the method by which they will be notified.

(iv) A description of the procedure to be followed by equipment or engine owners to obtain correction of the nonconformity including the date on or after which the owner can have the nonconformity remedied, the time reasonably necessary to perform the labor required to correct the nonconformity, and the designation of facilities at which the nonconformity can be remedied. The repair shall be completed within a reasonable time designated by the Executive Officer from the date the owner delivers the equipment or engine for repair. This requirement becomes applicable on the date designated by the manufacturer as the date on or after which the owner can have the nonconformity remedied.

(v) If some or all of the nonconforming equipment or engines are to be remedied by persons other than dealers or authorized warranty agents of the manufacturer, a description of such class of persons and a statement indicating that the participating members of the class will be properly equipped to perform such remedial action.

(vi) The capture rate required for each class or category of equipment or engine to be recalled. Under recalls based on exceedance of emission standards, the capture rate shall be at a minimum 80 percent of the equipment or engine within the subject engine family.

(vii) The plan may specify the maximum incentives (such as a free tune-up or specified quantity of free fuel), if any, the manufacturer will offer to induce equipment or engine owners to present their equipment for repair, as evidence that the manufacturer has made a good faith effort to repair the percentage of equipment or engines specified in the plan. The plan shall include a schedule for implementing actions to be taken including identified increments of progress towards implementation and deadlines for completing each such increment.

(viii) A copy of the letter of notification to be sent to equipment or engine owners.

(ix) A description of the system by which the manufacturer will assure that an adequate supply of parts will be available to perform the repair under the recall plan including the date by which an adequate supply of parts will be available to initiate the repair campaign, and the method to be used to assure the supply remains both adequate and responsive to owner demand.

(x) A copy of all necessary instructions to be sent to those persons who are to perform the repair under the recall plan.

(xi) A description of the impact of the proposed changes on fuel economy, operation, performance and safety of each class or category of equipment or engines to be recalled and a brief summary of the data, technical studies, or engineering evaluations which support these descriptions.

(xii) A description of the impact of the proposed changes on the average emissions of the equipment or engines to be recalled based on noncompliance described in subsection (c)(1), above. The description shall contain the following:

(1.) Average noncompliance emission levels.

(2.) Average emission reduction or increase per pollutant resulting from the recall repair. These averages shall be verified by the manufacturer by applying the proposed recall repairs to two or more in-use equipment or engines representing the average noncompliance emission levels. Only those equipment or engines with baseline emission levels within 25 percent of the average emission levels of noncomplying pollutant(s) established under the in-use enforcement test program may be used by manufacturers to verify proposed recall repairs. The Executive Officer may allow the use of equipment or engines exceeding these upper averaging noncompliance limits if none which meet the limits can be reasonably procured.

(3.) An estimate of the average emission level per pollutant for a class or category of

equipment or engines after repair as corrected by the required capture rate. The estimated average emission level shall comply with the applicable emission standards. If the average emissions levels achieved by applying the average emission reduction per equipment or engine after repair and the estimated capture rate, do not achieve compliance with the emissions standards, a manufacturer shall propose other measures to achieve average emissions compliance.

(xiii) Any other information, reports, or data which the Executive Officer may reasonably determine to be necessary to evaluate the recall plan.

(6) Approval and Implementation of Recall Plan.

(A) If the Executive Officer finds that the recall plan is designed effectively to correct the nonconformity and complies with the provisions of this Section, he or she will so notify the manufacturer in writing. Upon receipt of the approval notice from the Executive Officer, the manufacturer shall commence implementation of the approved plan. Notification of equipment or engine owners and the implementation of recall repairs shall commence within 45 days of the receipt of notice unless the manufacturer can show good cause for the Executive Officer to extend the deadline.

(B) If the Executive Officer does not approve the recall plan or the mitigation measures provided in this Section as submitted, the Executive Officer shall order modification of the plan or mitigation measures with such changes and additions as he or she determines to be necessary. The Executive Officer shall notify the manufacturer in writing of the disapproval and the reasons for the disapproval.

(C) The manufacturer may contest the Executive Officer's disapproval by requesting a public hearing pursuant to the procedures set forth in Subchapter 1.25, Division 3, Chapter 1, Title 17, California Code of Regulations. As a result of the hearing, the Board may affirm, overturn or modify the Executive Officer's action. In its decision, affirming or modifying, the Board shall specify the date by which the manufacturer shall commence notifying equipment or engine owners and implementing the required recall repairs.

(D) If no public hearing is requested in accordance with (C) above, the manufacturer shall incorporate the changes and additions required by the Executive Officer and shall commence notifying equipment or engine owners and implementing the required recall repairs within 60 days of the manufacturer's receipt of the Executive Officer's disapproval.

(7) Notification of Owners.

(A) Notification to equipment or engine owners shall be made by first class mail or by such other means as approved by the Executive Officer provided, that for good cause, the Executive Officer may require the use of certified mail to ensure an effective notification.

(B) The manufacturer shall use all reasonable means necessary to locate equipment or engine owners provided, that for good cause, the Executive Officer may require the manufacturer to use motor equipment registration lists, as applicable, available from State or commercial sources to obtain the names and addresses of equipment or engine owners to ensure effective notification.

(C) The Executive Officer may require subsequent notification by the manufacturer to equipment or engine owners by first class mail or other reasonable means provided, that for good cause, the Executive Officer may require the use of certified mail to ensure effective notification.

(D) The notification of equipment or engine owners shall contain the following:

(i) The statement: "The California Air Resources Board has determined that your (equipment or engine) (is or may be) releasing air pollutants which exceed (California or California and Federal) standards. These standards were established to protect your health and welfare from the dangers of air pollution."

(ii) A statement that the nonconformity of any such equipment or engines will be remedied at the expense of the manufacturer.

(iii) A statement that eligibility may not be denied solely on the basis that the equipment or engine owner used parts not manufactured by the original equipment manufacturer, or had repairs performed by outlets other than the equipment or engine manufacturer's franchised dealers.

(iv) A clear description of the components which will be affected by the recall action and a general statement of the measures to be taken to correct the nonconformity.

(v) [Reserved]

(vi) A description of the adverse effects, if any, that an uncorrected nonconformity would have on the performance, fuel economy, or driveability of the equipment or engine or to the function of other engine components.

(vii) A description of the procedure which the equipment or engine owner should follow to obtain correction of the nonconformity including the date on or after which the owner can have the nonconformity remedied, the time reasonably necessary to correct the nonconformity, and a designation of the facilities located in California at which the nonconformity can be remedied.

(viii) After the effective date of the recall enforcement program referred to above, a statement that a certificate showing that the equipment has been repaired under the recall program shall be issued by the service facilities and that such a certificate may be required as a condition of equipment registration or operation, as applicable.

(ix) A card to be used by a equipment or engine owner in the event the equipment or engine to be recalled has been sold. Such card should be addressed to the manufacturer, have postage paid, and shall provide a space in which the owner may indicate the name and address of the person to whom the equipment or engine was sold.

(x) The statement: "In order to ensure your full protection under the emission warranty made applicable to your (equipment or engine) by State or Federal law, and your right to participate in future recalls, it is recommended that you have your (equipment or engine) serviced as soon as possible. Failure to do so could be determined to be a lack of proper maintenance of your (equipment or engine)".

(xi) A telephone number provided by the manufacturer, which may be used to report difficulty in obtaining recall repairs.

(xii) The manufacturer shall not condition eligibility for repair on the proper maintenance or use of the equipment except for strong or compelling reasons and with approval of the Executive Officer; however, the manufacturer shall not be obligated to repair a component which has been removed or altered so that the recall action cannot be performed without additional cost.

(xiii) No notice sent pursuant to Section (D), nor any other communication sent to equipment or engine owners or dealers shall contain any statement, express or implied, that the nonconformity does not exist or will not degrade air quality.

(xiv) The manufacturer shall be informed of any other requirements pertaining to the notification under this section which the Executive Officer has determined are reasonable and necessary to ensure the effectiveness of the recall campaign.

(8) Repair Label.

(A) The manufacturer shall require those who perform the repair under the recall plan to affix a label to each equipment or engine repaired or, when required, inspected under the recall plan.

(B) The label shall be placed in a location as approved by the Executive Officer and shall be fabricated of a material suitable for such location and which is not readily removable.

(C) The label shall contain the recall campaign number and a code designating the facility at which the repair, inspection for repair, was performed.

(9) Proof of Correction Certificate. The manufacturer shall require those who perform the recall repair to provide the owner of each equipment or engine repaired with a certificate, through a protocol and in a format prescribed by the Executive Officer, which

indicates that the noncomplying equipment or engine has been corrected under the recall program. This requirement shall become effective and applicable upon the effective date of the recall enforcement program referred to in this section, above.

(10) Capture Rates and Alternative Measures.

The manufacturer shall comply with the capture rate specified in the recall plan as determined pursuant to this Section, above, by the end of the fifth quarter, as defined in Section 2112(j), Chapter 2, Title 13 of the California Code of Regulations, following the quarter in which the notification of equipment or engine owners was initiated. If, after good faith efforts, the manufacturer cannot correct the percentage of equipment specified in the plan by the applicable deadlines and cannot take other measures to bring the engine family into compliance with the standards, the manufacturer shall propose mitigation measures to offset the emissions of the unrepaired equipment within 45 days from the last report filed pursuant to Section 2439(c)(13), below. The Executive Officer shall approve such measures provided that:

(A) The emission reductions from the recalled and repaired equipment or engines and the mitigation measures are equivalent to achieving the capture rate; and

(B) The emission reductions from the mitigation measures are real and verifiable; and

(C) The mitigation measures are implemented in a timely manner.

(11) Preliminary Tests. The Executive Officer may require the manufacturer to conduct tests on components and equipment or engines incorporating a proposed correction, repair, or modification reasonably designed and necessary to demonstrate the effectiveness of the correction, repair, or modification.

(12) Communication with Repair Personnel. The manufacturer shall provide to the Executive Officer a copy of all communications which relate to the recall plan directed to dealers and other persons who are to perform the repair. Such copies shall be mailed to the Executive Officer contemporaneously with their transmission to dealers and other persons who are to perform the repair under the recall plan.

(13) Recordkeeping and Reporting Requirements.

(A) The manufacturer shall maintain sufficient records to enable the Executive Officer to conduct an analysis of the adequacy of the recall campaign. For each class or category of equipment or engine, the records shall include, but need not be limited to, the following:

(i) Engine family involved and recall campaign number as designated by the manufacturer.

(ii) Date owner notification was begun, and date completed.

- (iii) Number of equipment or engines involved in the recall campaign.
 - (iv) Number of equipment or engines known or estimated to be affected by the nonconformity.
 - (v) Number of equipment or engines inspected pursuant to the recall plan and found to be affected by the nonconformity.
 - (vi) Number of inspected equipment or engines.
 - (vii) Number of equipment or engines receiving repair under the recall plan.
 - (viii) Number of equipment or engines determined to be unavailable for inspection or repair under the recall plan due to exportation, theft, scrapping, or for other reasons (specify).
 - (ix) Number of equipment or engines determined to be ineligible for recall action due to removed or altered components.
 - (x) A listing of the identification numbers of equipment or engines subject to recall but for whose repair the manufacturer has not been invoiced. This listing shall be supplied in a standardized computer data storage device to be specified by the Executive Officer. The frequency of this submittal, as specified in subsection (C) below, may be changed by the Executive Officer depending on the needs of recall enforcement.
 - (xi) Any service bulletins transmitted to dealers which relate to the nonconformity and which have not previously been submitted.
 - (xii) All communications transmitted to equipment or engine owners which relate to the nonconformity and which have not previously been submitted.
- (B) If the manufacturer determines that the original responses to subsections (A)(iii) and (iv) of these procedures are incorrect, revised figures and an explanatory note shall be submitted. Responses to subsections (A)(v), (vi), (vii), (viii), and (ix) shall be cumulative totals.
- (C) Unless otherwise directed by the Executive Officer, the information specified in subsection (A) of these procedures shall be included in six quarterly reports or two annual reports, beginning with the quarter in which the notification of owners was initiated, or until all nonconforming equipment or engines involved in the campaign have been remedied, whichever occurs sooner. Such reports shall be submitted no later than 25 days after the close of each calendar quarter.
- (D) The manufacturer shall maintain in a form suitable for inspection, such as computer information storage devices or card files, and shall make available to the Executive

Officer or his or her authorized representative upon request, lists of the names and addresses of equipment or engine owners:

- (i) To whom notification was given;
- (ii) Who received remedial repair or inspection under the recall plan; and
- (iii) Who were denied eligibility for repair due to removed or altered components.

(E) The records and reports required by these procedures shall be retained for not less than one year beyond the useful life of the equipment or engines involved, or one year beyond the reporting time frame specified in subsection (C) above, whichever is later.

(14) Penalties.

Failure by a manufacturer to carry out all recall actions ordered by the Executive Officer pursuant to Sections 2439(c) of these procedures is a violation of Health and Safety Code Section 43013 and 43105 and shall subject the manufacturer, on a per engine basis, to any and all remedies available under Part 5, Division 26 of the Health and Safety Code, sections 43000 et seq.

(d) Extension of Time. The Executive Officer may extend any deadline in the plan if he or she finds in writing that a manufacturer has shown good cause for such extension.

(e) The Executive Officer may waive any or all of the requirements of these procedures if he or she determines that the requirement constitutes an unwarranted burden on the manufacturer without a corresponding emission reduction.

[All sections referring to in-use compliance have been replaced with existing the ARB program. The ARB in-use compliance program provides greater assurance that engines will maintain their emissions during their useful life.]

§1048.420 What in-use testing information must I report to EPA?

DELETE

[Replaced by 2438-9 language in §1048.410-415]

[The language is not necessary as information regarding the reporting of in-use testing is already contained in §1048.415.]

§1048.425 What records must I keep?

DELETE

[Replaced by 2438-9 language in §1048.410-415;The provisions contained in §1048.415 include submittal of an electronic report to ARB; as such, there is no need to retain records.]

Subpart F—Test Procedures

§1048.501 How do I run a valid emission test?

§1048.505 How do I test engines using steady-state duty cycles, including ramped-modal testing?

§1048.510 Which duty cycles do I use for transient testing?

§1048.515 What are the field-testing procedures?

Subpart G—Compliance Provisions

§1048.601 What compliance provisions apply to these engines?

§1048.605 What provisions apply to engines certified under the motor-vehicle program?

§1048.610 What provisions apply to vehicles certified under the motor-vehicle program?

§1048.615 What are the provisions for exempting engines designed for lawn and garden applications?

* * * * *

(a)

(3) DELETE AND REPLACE WITH:

The engine must be in an engine family that has a valid executive order showing that it meets emission standards for Class II engines under Title 13, California Code of Regulations, Chapter 9, Article 1, Small Off-Road Engines and Chapter 15, Article 1, Evaporative Emission Requirements for Off-Road Equipment.

* * * * *

(d) DELETE AND REPLACE WITH:

Engines exempted under this section are subject to all the requirements affecting engines under Title 13, California Code of Regulations, Chapter 9, Article 1, Small Off-Road Engines and Chapter 15, Article 1, Evaporative Emission Requirements for Off-Road Equipment. The requirements and restrictions of Title 13, California Code of Regulations, Chapter 9, Article 1, Small Off-Road Engines and Chapter 15, Article 1, Evaporative Emission Requirements for Off-Road Equipment apply to anyone manufacturing these engines, anyone manufacturing equipment that uses these engines, and all other persons in the same manner as if these engines had a total maximum engine power at or below 19 kW.

§1048.620 What are the provisions for exempting large engines fueled by natural gas?

§1048.625 What special provisions apply to engines using noncommercial fuels?

§1048.630 What are the provisions for exempting engines used solely for competition?

§1048.635 What special provisions apply to branded engines?

Subpart H—[Reserved]

Subpart I—Definitions and Other Reference Information

§1048.801 What definitions apply to this part?

The following definitions apply to this part. The definitions apply to all subparts unless we note otherwise. All undefined terms have the meaning the Act gives to them. The definitions follow:

* * * * *

All-terrain vehicle has the meaning given in 40 CFR 1051.801

DELETE AND REPLACE WITH: All-terrain vehicle has the meaning given in Title 13, California Code of Regulations, Chapter 9, Article 3, Off-Highway Recreational Vehicles and Engines.

[EPA's definition is inconsistent with the existing California definition for Off-Highway Recreational Vehicles and Engines]

* * * * *

Designated Compliance Officer means the Manager, Engine Programs Group (6405-J), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

DELETE AND REPLACE WITH:

Designated Compliance Officer means the Executive Officer of the California Air Resources Board or a designee of the Executive Officer.

Designated Enforcement Officer means the Director, Air Enforcement Division (2242A), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., NW., Washington, DC 20460.

DELETE AND REPLACE WITH:

Designated Enforcement Officer means any officer or employee of the California Air Resources Board so designated in writing by the Executive Officer or by the Executive Officer's designee.

* * * * *

Small-volume engine manufacturer means a company with fewer than 200 employees. This includes any employees working for parent or subsidiary companies.

DELETE AND REPLACE WITH:

Small-volume manufacturer means an engine manufacturer that produces a total of less than 2000 large spark-ignition engines annually for sale in the United States of America.

* * * * *

§1048.805 What symbols, acronyms, and abbreviations does this part use?

§1048.810 What materials does this part reference?

§1048.815 What provisions apply to confidential information?

§1048.820 How do I request a hearing from the executive officer of the ARB?

(a) You may request a hearing under certain circumstances, as described elsewhere in this part. To do this, you must file a written request, including a description of your objection and any supporting data, within 30 days after we make a decision.

(b) For a hearing you request under the provisions of this part, we will approve your request if we find that your request raises a substantial factual issue.

(c) If we agree to hold a hearing, we will use the procedures specified in §1048.15(b)(7).

Appendix I to Part 1048—Large Spark-ignition (SI) Transient Cycle for Constant-Speed Engines
Appendix II to Part 1048—Large Spark-ignition (SI) Composite Transient Cycle