

**State of California
AIR RESOURCES BOARD**

**INITIAL STATEMENT OF REASONS
FOR RULEMAKING
A PROPOSED REGULATION TO ESTABLISH A
STATEWIDE PORTABLE EQUIPMENT REGISTRATION PROGRAM**

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VOLUME II: TECHNICAL SUPPORT DOCUMENT

This report has been reviewed by the staff of the California Air Resources Board and approved for publication. Publication does not signify that the contents reflect the views and policies of the Air Resources Board, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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I.

INTRODUCTION AND BACKGROUND

A. OVERVIEW

This technical support document presents the justification for a proposed regulation which creates a uniform, Statewide Registration Program for portable engines and associated equipment. Assembly Bill 531 [Morrissey, 1995], Assembly Bill 2635 [Morrissey, 1996], and Senate Bill 1880 [Lewis, 1996] require the Air Resources Board (ARB) to establish, by regulation, a statewide registration program for portable internal combustion engines and associated equipment. Examples of portable internal combustion engines include, but are not limited to, portable engines used in conjunction with the following types of portable operations: well drilling; service or work-over rigs; power generation, excluding cogeneration; pumps; compressors; diesel pile-driving hammers; welding; cranes; woodchippers; dredges; equipment necessary for the operation of portable engines and associated equipment; and military tactical support equipment. Associated equipment identified in section 41751 of the California Health and Safety Code (HSC) include confined and unconfined abrasive blasting, Portland concrete batch plants, sand and gravel screening, rock crushing, and unheated pavement recycling and crushing. In addition, equipment necessary for the operation of portable engines (e.g., fuel tanks) qualifies for registration under the Statewide Registration Program. The proposed Regulation was developed by staff of the ARB in consultation with affected industry, interested parties, local air pollution control and management districts (districts), and the United States Environmental Protection Agency (U.S. EPA).

The technical information presented in this document supports and explains the development of the Proposed Regulation to Establish a Statewide Portable Equipment Registration Program (proposed Regulation). The proposed Regulation and supporting information were developed through a collaboration of interested parties. The Engine Manufacturers Association (EMA); engine and associated equipment rental industry; sand and gravel industry; construction industry; oil production industry; and other regulated industries all furnished insightful and useful technical information for this document and the proposed Regulation which it supports. In addition, information from technical reports, regulatory agencies, and other sources was utilized. The actual proposed Regulation was drafted through the collective efforts of industry, regulatory agencies, and the public.

This document presents the following information:

- the process used to develop the proposed Regulation;
- a discussion of the requirements and provisions of the proposed Regulation;
- a discussion of economic considerations; and
- a discussion of air quality considerations.

B. BACKGROUND

The federal Clean Air Act provides conditional authority for California to directly regulate both stationary and mobile sources of air pollution. California motor vehicles are regulated by the ARB. The authority to directly regulate stationary sources is provided by State law (HSC sections 39002 and 40000) to the districts. Each of the 34 districts operates independently and has its own set of regulations to address the emissions from stationary sources. The independence of the districts allows specific air quality problems to be addressed on a local level. To limit and reduce specific pollutants that are considered critical to local air quality problems, operating permits that contain specific operating conditions and/or restrictions are issued by each district. Consequently, stationary sources may have different permit requirements in different districts throughout the State even if they are identical in design and operation.

1. Legislative Authority to Regulate Stationary and Nonroad Engines and Associated Equipment

With the California Clean Air Act of 1988, the Legislature granted the ARB authority to adopt standards and regulations for off-road vehicles and equipment (HSC sections 43013(b) and 43018.) The granting of authority, however, did not expressly preempt the local districts of their authority to regulate and permit nonvehicular off-road equipment. The ARB and the districts have interpreted the HSC to provide for concurrent jurisdiction over such equipment. Currently, many districts issue permits for portable engines and associated equipment through stationary source permitting programs, but portable engines and associated equipment exhibit attributes of both stationary and mobile sources. They are often of similar design to stationary sources, but because portable engines and associated equipment move around (an aspect of mobile sources), their operational characteristics may be different. Because each district has its own rules, regulations, fees, and permitting requirements, this system of permitting and/or registering portable internal combustion engines and associated equipment is inconsistent statewide. As a result, owners and/or operators of portable engines and associated equipment must pay fees, obtain operating permits, and adhere to different sets of regulations and requirements each time an engine and/or associated equipment is moved to a different district. Attempts to relieve the problems facing owners and/or operators of portable engines and/or associated equipment by standardizing the permitting process at the district level have been unsuccessful.

The federal Clean Air Act Amendments (CAA) of 1990 gave the U.S. EPA authority to regulate new nonroad (off-road) engines. The amendments created a federal preemption that, in general, prevents states (including districts) from adopting emissions standards or other requirements for nonroad engines [CAA, section 209(e)] (portable engines are a subset of nonroad engines). However, recognizing the special circumstances confronting California, Congress allowed California, upon receiving authorization from the U.S. EPA, to adopt standards and regulations for preempted equipment with the exception of new engines under 175 bhp used

in farm and construction operations. Further, HSC section 42310(e) prohibits the district or the State from requiring a permit for farm equipment. Because the State cannot require permits for farm operations, subsequent references will only be made to construction engines.

In June and July of 1994, the U.S. EPA issued two final rules in which it defined the scope of the CAA section 209(e) (59 Fed. Reg. 31306 [June 17, 1994]; 59 Fed. Reg. 36969 [July 20, 1994]). A key issue that needed to be defined is what constitutes a nonroad source subject to the provisions of Title II of the CAA, and what constitutes a stationary source subject to the provisions of Title I. While Title II applies to mobile sources for which the U.S. EPA has primary authority to regulate, most authority for regulation and control of stationary sources under Title I is delegated to the states and local governmental units (districts). In crafting the federal rules and lines of authority, the U.S. EPA attempted to balance the needs of the states and districts to retain authority to control local sources of emissions while recognizing the concerns of Congress that manufacturers of nonroad engines should be subject, as much as possible, to uniform standards. In coming to terms with these conflicting requirements, the U.S. EPA reached the following conclusions in regulations published in CFR 40 part 89:

- Portable engines manufactured after July 18, 1994 are considered nonroad mobile sources and are subject to Title II of the CAA.
- Portable engines manufactured prior to July 18, 1994 are considered stationary sources and are subject to Title I of the CAA.
- The nonroad preemption of the CAA section 209(e)(1) and the requirement that California may adopt its own independent regulations (209(e)(2)), after first receiving authorization from the U.S. EPA, applies only to new engines. “New” is defined narrowly as new until sold to an ultimate purchaser or first used.
- The states and local districts retain authority to regulate existing, no longer new, nonroad engines in-use. This includes authority to regulate in-use operational controls, including hours of operation, mass emission limits, and fuel certification requirements, and to issue permits and levy fees as under Title I of the CAA.
- The states and local districts have, in general, limited authority to require retrofitting of no longer new nonroad engines. The limitation in California authority would be with regard to previously new engines under 175 bhp used in farm and construction equipment and vehicles.

The final rules were challenged in federal court by several parties. After affected industry challenged U.S. EPA’s interpretation of the nonroad definition of July 18, 1994, U.S. EPA requested that the court remand to U.S. EPA that part of the federal rule regarding the July 18, 1994 effective date for reconsideration. In *EMA vs. U.S. EPA*, the Court of Appeals affirmed U.S. EPA’s definition of “new” as it applies to section 209(e)(1) and the right of states and

districts to regulate operational controls. The court, however, disagreed with U.S. EPA's interpretation that section 209(e)(2) as applied to "new" engines. Consequently, California must obtain authorization for all nonroad engines.

Regarding the applicability date of the section 209(e) preemption, U.S. EPA, to date has not decided on a new date. However, for the purposes of applying section 209(e) of the CAA to the Statewide Registration Program, ARB has assumed the applicable date to be November 15, 1990. Thus, for the purpose of regulatory authority, all portable engines manufactured prior to November 15, 1990, would not be considered a nonroad source and would be required to incorporate control technologies, meet emission limitations, or otherwise be regulated by the ARB or the districts. Engines manufactured after November 15, 1990, would be considered nonroad engines and would not be required to incorporate control technologies or other control requirements by the districts. However, districts would maintain the authority to permit nonroad engines and establish in-use operational controls such as daily and annual emission limits. The State, upon receiving approval from U.S. EPA, however, could require nonroad engines (except nonroad engines under 175 bhp used in construction operations) to incorporate control technologies, meet emission limitations, or otherwise be regulated. ARB intends to request approval from the U.S. EPA for the proposed Regulation upon approval by the ARB Board.

2. Previous Attempts to Create Uniform Statewide Program

At its August 13, 1992, meeting, the Board directed the ARB staff to work closely with U.S. EPA and local districts to develop uniform requirements statewide for portable equipment. Staff worked with the California Air Pollution Control Officers Association (CAPCOA), to form a portable equipment subcommittee to develop a statewide program for portable equipment. The CAPCOA subcommittee included members from districts, ARB staff and industry. The subcommittee drafted a model portable equipment registration rule intended for adoption by all of the California districts. The registration rule would create a statewide registration process, with uniform fees and requirements. Districts would still independently register portable engines and associated equipment, but once registered in one district, all other districts would recognize the engines and associated equipment as registered in the State. Engine and associated equipment operators would be able to relocate at different sites within California without applying for site and district specific permits. To achieve a consistent statewide registration for these emissions units, districts agreed, in principle, to uniform fees, emission limits, and reciprocity between districts for registered equipment units.

The model portable equipment registration rule was approved by the Board of directors of CAPCOA on April 28, 1994. Once approved, the proposed model rule was sent to all districts for adoption. Some districts adopted the rule, others modified the model rule to address individual district needs and issues, while other districts did not adopt the rule at all. Since the CAPCOA model rule was not adopted uniformly by each of the districts, the problem facing owners and/or operators of portable engines and associated equipment remained. Industry representatives believed the attempt to create a statewide uniform permitting process for portable

engines and associated equipment was unsuccessful so they asked the California Legislature to provide a solution.

The California Legislature approved Assembly Bill 531 (AB 531) which requires the ARB to develop an alternative to the complex permitting process for portable engines. Assembly Bill 531 was signed by the Governor October 12, 1995, and is now contained in sections 41750-41755 of the HSC. Sections 41750-41755 of the HSC require the ARB to adopt a regulation that establishes a uniform statewide system for the registration and regulation of portable internal combustion engines. The program would be voluntary for most portable engines, in that portable engine owners and/or operators would be allowed to participate in either the ARB program or remain with the district programs.

In developing the regulation, the ARB is required by the legislation to evaluate emissions of pollutants, identify emission reduction technologies that may be applied, hold at least one public hearing, establish emission limits and emission control requirements, and develop a fee schedule to cover the costs of adopting and administering the program (including a fee to recover the cost of district enforcement). Sections 41750-41755 (AB 531) of the HSC prohibit the districts from permitting, registering, or regulating portable engines registered with the ARB. However, enforcement of the registration program would be the responsibility of the districts. Portable engines not registered with the ARB would continue to be subject to district rules and requirements.

During the process of developing the proposed Regulation, industry representatives identified a number of issues and concerns that were not adequately considered by the legislature in the drafting of sections 41750-41755 (AB 531) of the HSC. Subsequent 1996 legislation, Assembly Bill 2635 (AB 2635), signed by the Governor September 11, 1996, and Senate Bill 1880 (SB 1880), signed by the Governor September 27, 1996, were an attempt by industry to address these issues and concerns.

Both AB 2635 and SB 1880 clarify the definition of "portable" so that it is more consistent with the definition found in the U.S. EPA off-road engine regulations. In addition, Assembly Bill 2635 expands the scope of the portable engine regulation to include equipment associated with the engines, and requires that recordkeeping and reporting be the minimum necessary to provide emission data, track the use of engines and associated equipment, and allow enforcement of the Statewide Registration Program. Assembly Bill 2635 limits engine source testing for compliance purposes to once every three years, unless emissions problems are identified or no manufacturer's emissions data is available. The Bill also prohibits source testing for compliance purposes if there are no applicable emission limits for the engine. Finally, AB 2635 clarifies a requirement that engines and associated equipment registered in the Statewide Registration Program shall not, in the aggregate, violate the ambient air quality standards or compromise the State Implementation Plan to attain ambient air quality standards.

II.

PUBLIC PROCESS TO DEVELOP PROPOSED REGULATION

A. INTRODUCTION

Sections 41750-41755 of the HSC require the ARB to adopt a Statewide Registration Program for portable engines and associated equipment on or before July 1, 1997. The proposed Regulation was developed by the ARB staff in consultation with affected industry, interested parties, local districts, and the U.S. EPA.

B. PUBLIC PROCESS

The proposed Regulation was developed in consultation with a workgroup assembled by the ARB staff consisting of local, State, and federal air quality agencies and representatives from affected industries such as oil services, well drilling, construction, sanitation, motion picture, rental, and manufacturing industries. This group, known as the AB 531 Portable Equipment Registration Workgroup (Workgroup), discussed and developed the components needed to create a regulation that meets the requirements and intent of the legislation, and that deals with implementation concerns of affected parties. The names of the Workgroup members are included in the acknowledgments preceding Volume I: Executive Summary of the Proposed Regulation to Establish a Statewide Portable Equipment Registration Program.

The Workgroup assembled by ARB staff assisted in developing the proposed Regulation. The Workgroup identified many issues of concern. In order to more effectively deal with major issues raised by the Workgroup, subgroups were formed to address the issues and bring back recommendations for the Workgroup to consider. The following issues were addressed by the subgroups:

Definitions Subgroup

The definitions subgroup helped define the terms used in the proposed Regulation. Specific definitions are critical because they determine how the provisions of the proposed Regulation affect the operation of, and limitations placed on, the engines and associated equipment registered in the Statewide Registration Program. Some of the definitions from the proposed Regulation are discussed in Chapter III, section B, C, and D of this document.

Daily versus Annual Emission Limits Subgroup

This subgroup discussed the necessity of and impacts of daily and annual emission

limits. Daily emission limits guard against short-term ambient air quality standard exceedances. This is of particular concern in air basins where ambient concentrations of nitrogen dioxide, carbon monoxide, or particulate matter smaller than 10 microns (PM₁₀) may occasionally exceed state or federal ambient air quality standards. Annual emission limits were set to ensure that portable engines and associated equipment registered in the Statewide Registration Program are not subject to the Title V permit program of the CAA. In addition, because offsets are not required under the Statewide Registration Program, daily and annual emission limits are comparable to, or protective of, district requirements for new or modified engines and associated equipment.

Incentives Subgroup

This subgroup discussed possible incentives for engine owners to reduce emissions or to purchase newer, cleaner engines. The incentives are designed to encourage an engine owner to purchase a cleaner engine, or install emission control equipment on an existing engine as opposed to continuing to operate an older, higher emitting engine.

Best Available Control Technology Subgroup

The Best Available Control Technology (BACT) subgroup evaluated BACT determinations for portable internal combustion engines. Section 41754 of the HSC requires the Statewide Registration Program to maintain the most stringent district BACT requirements adopted by a district for each class or category of portable internal combustion engine or associated equipment in effect on January 1, 1995.

Legal Issues Subgroup

This subgroup analyzed issues identified by the Workgroup that were subject to legal interpretation including: control requirements, stationary versus nonroad engines, delegation of the Statewide Registration Program and administrative duties to districts, variances, and the definition of location.

Recordkeeping and Reporting Requirements Subgroup

Equipment owners and/or operators expressed concern that stationary source recordkeeping and reporting has typically been onerous for portable operations. Recordkeeping and reporting is needed for districts and the ARB to enforce the proposed Regulation and maintain the emission inventory. This subgroup developed proposals for the minimum and least burdensome recordkeeping and reporting requirements.

The Workgroup reviewed and commented on three separate drafts of the proposed Regulation during its development. Comments were also received during the two public workshops. Many of the public's comments and concerns were incorporated into the

initial draft of the proposed Regulation. The initial draft of the proposed Regulation was more recently revised to incorporate the changes mandated by 1996 legislation (AB 2635 and SB 1880). Primarily, this legislation included portable equipment units associated with the operation of portable engines in the Statewide Registration Program.

III.

DISCUSSION OF PROPOSED REGULATION

A. INTRODUCTION

This chapter complies with Government Code section 11343.2 by providing a discussion of the major provisions of the proposed Regulation. This chapter also addresses the major concerns and issues raised during Workgroup meetings, public comment periods, and public workshops regarding the proposed Regulation.

The proposed Regulation creates a uniform, Statewide Registration Program for portable engines and associated equipment. For the purpose of the proposed Regulation, portable engine associated equipment is defined as an “equipment unit.” The proposed Regulation would allow portable engines and equipment units that meet the requirements of the proposed Regulation to operate throughout the State of California. Districts would be preempted from permitting, registering, setting emission limits, requiring control equipment, or assessing fees on engines and equipment units registered in the Statewide Registration Program. Districts are required by State law to enforce the proposed Regulation, and recover the costs associated with inspection (as specified in the proposed Regulation) of portable engines and equipment units. Owners and/or operators must demonstrate that their portable engines and equipment units would comply with the requirements of the proposed Regulation in order to qualify for registration.

The proposed Regulation was developed to comply with State and federal regulations, and adhere to the requirements of the mandating legislation. The proposed Regulation preserves district BACT requirements for engine-associated equipment and engines. Engines having a history of operating under a district program would be required to meet a level of control equivalent to Reasonably Available Control Technology (RACT) or Best Available Retrofit Control Technology (BARCT).

B. ELIGIBILITY

Owners and/or operators of engines and equipment units meeting the definition of portable, as specified below, may register their engines and equipment units in the Statewide Registration Program. Registration is voluntary for most portable engines and all equipment units. Registration is mandatory for portable engines where the following occurs:

1. a district has in effect on or before January 1, 1997, a permit or registration program applicable to portable engines rated at 50 brake horsepower or greater; and
2. the permit or registration program establishes control technology requirements, in-

- use operational controls (e.g., daily or annual emission limits) or a district has identified proposed control measures applicable to portable engines in the State Implementation Plan; and
3. a district has notified ARB that it no longer intends to permit or register portable engines because of preemption, or the Executive Officer has determined that a district can no longer regulate such engines because of preemption.

In implementing the mandatory provisions of the proposed Regulation, ARB would notify districts, in writing, requesting a response as to the districts' intentions to continue to permit or register portable engines. Based on information obtained from the district, and U.S. EPA regarding the scope of section 209 (e)(2) preemption as it pertains to the districts, the Executive Officer would determine in which districts the Statewide Registration Program would become mandatory. Any determination made by the Executive Officer would be set forth in an Executive Order. Affected owners and/or operators would be notified by the ARB and/or districts of the issuance of the Executive Order within 30 days of issuance. Owners and/or operators of portable engines would have 180 days from the issuance of the Executive Order to submit applications for registration under the Statewide Registration Program.

Portable engines and equipment units include, but are not limited to, internal combustion engines and processes associated with the engines including: confined abrasive blasting units, Portland concrete batch plants, sand and gravel processing operations, and unconfined abrasive blasting units. Military tactical support equipment, including turbines, are also eligible for registration. New engines rated less than 175 bhp used primarily in construction operations are eligible for registration but because of federal preemption, would only be subject to in-use operational controls, i.e., daily and annual emission limits and fuel use restrictions.

1. Definition of “Portable” and “Location”

The proposed Regulation defines “portable” as follows:

Portable means designed and capable of being carried or moved from one location to another. Indicia of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. For the purposes of this regulation, dredge engines on a boat or barge are considered portable. The engine or equipment unit is not portable if any of the following are true:

the engine or equipment unit or its replacement is attached to a foundation, or if not so attached, will reside at the same location for more than 12 consecutive months. Any engine or equipment unit such as back-up or stand-by engines or equipment units, that replace engine(s) or equipment unit(s) at a location and is intended to perform the same or similar function as the engine(s) or equipment unit(s) being replaced, will be included in calculating the consecutive time period. In that case, the

cumulative time all engine(s) or equipment unit(s), including the time between the removal of the original engine(s) or equipment unit(s) and installation of the replacement engine(s) or equipment unit(s), would be counted toward the consecutive time period; or

the engine or equipment unit remains or will reside at a location for less than 12 consecutive months if the engine or equipment unit is located at a seasonal source and operates during the full annual operating period of the seasonal source, where a seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location at least three months each year; or

the engine or equipment unit is moved from one location to another in an attempt to circumvent the portable residence time requirements.

[The period during which the engine or equipment unit is maintained at a storage facility shall be excluded from the residency time determination.]

Any engine or equipment unit that satisfies the definition of portable qualifies for registration under the Statewide Registration Program.

For the purposes of the Statewide Registration Program, a “location” is any place of operation or single site at a building, structure, facility, installation, well site, or job site on a stationary source. For engines and equipment units to be considered portable (among other requirements), the engines and equipment units must not reside at any one location for more than 12 consecutive months.

2. Definition of “Engines”

The proposed Regulation defines engine as any piston-driven internal combustion engine. Under the proposed regulation, engines used in conjunction with various operations, such as well drilling, service or work-over rigs, power generation, pumps, compressors, diesel pile-driving hammers, welding, cranes, woodchippers, dredges, and military tactical support equipment, could register in the Statewide Registration Program.

For the purposes of the proposed Regulation, dredges on a boat or barge are considered portable engines. For a portable engine to qualify for the Statewide Registration Program, the engine must satisfy the definition of “portable” described in section B.1 of this chapter.

Engines used to propel mobile equipment or a motor vehicle of any kind are not eligible for statewide registration. Engines used exclusively in agricultural operations as defined in HSC section 42310 are exempt from permitting requirements, and thus exempt from registration. In

addition, engines operating at one location for more than 12 months, seasonal source engines, and other engines not meeting the definition of portable engines as defined in the regulation are not eligible for registration.

3. Definition of “Equipment Units”

For the purpose of the proposed Regulation an equipment unit is a portable engine-associated process that emits pollutants over and above those emitted from the engine. An equipment unit includes, but is not limited to: confined abrasive blasting, Portland concrete batch plants, sand and gravel screening, rock crushing, and unheated pavement recycling and crushing operations, and unconfined abrasive blasting. In addition, equipment necessary for the operation of a portable engine (e.g., fuel tanks) would be considered equipment units for the purposes of registration under the Statewide Registration Program.

For an equipment unit to qualify for the Statewide Registration Program, the equipment must satisfy the definition of “portable” described in section B.1 of this chapter.

4. Definition of “Hazardous Air Pollutants”

Local district permitting programs are designed to protect public health and welfare. This is accomplished through permit programs which require a site-specific analysis for compliance with all applicable rules and regulations. Registration programs on the other hand, such as the Statewide Registration Program, do not provide for any type of site-specific analysis because of the transient nature of portable operations. Portable operations which result in the emissions of Hazardous Air Pollutants (HAPs) can have a localized and direct impact on public health. The proposed Regulation defines “Hazardous Air Pollutant” as follows:

Hazardous Air Pollutant (HAP) means any pollutant that is listed pursuant to section 112(b) of the federal Clean Air Act.

The Statewide Registration Program may not provide adequate protection to the public since a site-specific analysis cannot be performed for each site that a portable engine or equipment unit operates. As a result, operation under the proposed Regulation would be allowed only at locations that are not associated with HAPs emissions. Examples include the use of abrasive blasting equipment to remove asbestos-containing materials or leaded paint; and the use of portable engines for destruction of HAPs from soil or groundwater remediation.

C. REQUIREMENTS

In order to meet the legislative mandate, ARB staff established requirements in the proposed Regulation based on its collective investigations and findings. The findings emphasize the control of emissions of nitrogen oxides (NO_x) from portable engines and emissions of particulate matter smaller than 10 microns (PM₁₀) from portable engines and equipment units.

Requirements also include emission limits for volatile organic compounds (VOCs), carbon monoxide (CO), PM₁₀, and HAPs. Engine requirements are based on a specific engine's residence status, size rating, date of manufacture, and control equipment configuration. For equipment units, the emission control requirements are established for each separate type of operation. Requirements for engines and equipment units are established separately to address differences in emissions, corresponding control technologies, and state and federal requirements. Military Tactical Support Equipment (TSE) owned and operated by the Department of Defense is exempt from most requirements as specified in HSC section 41754.

1. General Requirements for Engines and Equipment Units

The requirements discussed in this section apply to all classes or categories of portable engines and equipment units including TSE.

a. Nuisance Prohibition

Portable engines and equipment units registered under the proposed Regulation shall comply with HSC Article 1, Chapter 3, Part 4, Division 26, commencing with section 41700. This section prohibits any portable engine or equipment unit from operating in a manner that can be considered as a nuisance. More specifically, a portable engine or equipment unit shall not discharge air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

b. Limitation of Visible Emissions

Except for new portable engines rated less than 175 bhp used primarily in construction, no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as or darker than Ringlemann 1 as illustrated on the Ringlemann Chart published by the United States Bureau of Mines, or equivalent 20 percent opacity. Diesel pile-driving hammers and TSE shall comply with the applicable provisions of section 41701.5 and 41700 of the HSC respectively.

c. Protection of Ambient Air Quality Standards

California Health and Safety Code section 41754 requires that the emissions from engines and equipment units registered under the proposed Regulation shall not, in the aggregate, interfere with the attainment or maintenance of State or federal ambient air quality standards. In addition, the emissions from any one portable engine, exclusive of background concentration, shall not cause an exceedance of any ambient air quality standard. This paragraph shall not be construed as requiring portable engine and equipment unit operators to provide emission offsets for a portable engine or equipment unit registered under the proposed Regulation. It is not

expected that the universe of eligible engines and equipment units would increase as a result of the Statewide Registration Program. The emission limits specified for engines and equipment units are also expected to maintain consistency with existing programs. Finally, conservative modeling was performed for expected worst-case situations to estimate the emissions impact on air quality and ARB staff concluded that no exceedances are expected. Further discussion is contained within Chapter VI and Appendix G.

2. Requirements Specific to Engines

a. Exemptions

i. Military

Sections 41754 of the HSC specifically exempts military tactical support equipment from control technology requirements and in-use operational controls. The proposed Regulation defines military tactical support equipment as follows:

Military tactical support equipment (TSE) means equipment using a portable engine, including turbines, that meets military specifications, owned by the U.S. Department of Defense and/or the U.S. military services, and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations. Examples include, but are not limited to, internal combustion engines, associated with portable generators, aircraft start carts, heaters and lighting carts.

ii. Construction Engines

The federal Clean Air Act preempts states or districts from regulating new engines rated at less than 175 bhp used primarily in construction operations. Consequently, these engines are exempt from control technology requirements of the proposed Regulation. However, engines primarily used in construction operations shall comply with the daily and annual emission limits specified in the proposed Regulation and shall use only fuels meeting the standards for California motor vehicle fuels as set forth in Chapter 5, Division 3, Title 13, of the California Code of Regulations, commencing with section 2250.

The proposed Regulation defines “new nonroad engine”, “construction equipment”, and “primarily used” as follows:

New Nonroad Engine means a domestic or imported nonroad engine the equitable or legal title to which has never been transferred to an ultimate purchaser. Where the equitable or legal title to an engine is not transferred to an ultimate purchaser until after the engine is placed into service, then the engine will no longer be new after it is placed into service. A nonroad engine placed into

service when it is used for its functional purposes. The term ultimate purchaser means, with respect to new nonroad engine, the first person who in good faith purchases new nonroad vehicle or new nonroad engine for purposes other than resale.

Construction equipment means equipment that uses an internal combustion engine and that is primarily used (as defined below) in construction and operated at commercial construction sites.

Primarily used is a determination by U.S. EPA under section 209 (e) of the federal Clean Air Act, that 51 percent or more of specific type of engines and equipment units, with an engine under 175 maximum bhp rating; is used in the farm and construction industries.

In order for an engine to qualify for the federal preemption for construction operations, the requirements of the above definitions must be met.

iii. Pile Drivers

With the exception of subsection C.1.a, diesel pile-driving hammers are exempt from all requirements discussed in this section, but are required to comply with the applicable provisions of HSC section 41701.5.

iv. Exemption for Emergency Operations

In the event of an emergency, portable engines and equipment units are typically used to alleviate the threat to public health and safety. Because the use of this equipment is needed immediately and cannot wait for approval of permits or registration, the proposed Regulation provides for automatic registration for the duration of an emergency. Except for portable engines and equipment units permitted or registered by a district in which an emergency occurs, a portable engine or equipment unit operated during an emergency as defined in the proposed Regulation, is considered registered under the requirements of the Statewide Registration Program for the duration of the emergency and is exempt from section 2455 through 2459 of the proposed Regulation for the duration of the emergency provided the owner or operator notifies the Executive Officer of the ARB within 24 hours of commencing operation. The Executive Officer may for good cause refute that an emergency under this provision exists. If the Executive Officer deems that an emergency does not exist, all operation of portable engines and equipment units operating under this provision shall cease. Misrepresentation of an emergency and failure to cease operation under notice of the Executive Officer is a violation of this article and may subject the owner or operator to section 2465, Penalties, of the proposed Regulation.

The proposed Regulation defines emergency as follows:

Emergency means any situation arising from sudden and reasonably unforeseen natural disaster such as earthquake, flood, fire, or other acts of God, or other unforeseen events beyond the control of the portable engine and equipment unit operator, its officers, employees, and contractors, that threaten public health and safety and that requires the immediate temporary operation of portable engines or equipment units to help alleviate the threat to public health and safety.

b. Fuels

With the exception of TSE, engines registered under the Statewide Registration Program shall use only fuels meeting the standards for California motor vehicle fuels as set forth in Chapter 5, Division 3, Title 13, of the California Code of Regulations, commencing with section 2250.

c. Emission Limit for PM₁₀

Particulate matter emission concentration shall not exceed 0.1 grains per standard dry cubic feet corrected to 12 percent CO₂ for registered portable engines. This requirement does not apply to TSE, diesel pile-driving hammers, new engines rated at less than 175 bhp used primarily in construction operations, and engines meeting an applicable emissions standard set forth in Title 13 of the California Code of Regulations or CFR Part 89.

**d. Control Strategies for New vs. Existing Engines
(BACT vs. RACT/BARCT Discussion)**

Section 41754(a)(2) of the HSC requires the ARB to preserve the most stringent district BACT requirements for portable engines and equipment units in effect January 1, 1995. In addition, section 41754(b) requires that economic and technological feasibility be considered when establishing control requirements for resident engines. Historically, districts through New Source Review Programs (NSR) have applied BACT to new or modified sources. RACT/BARCT are applied to existing sources. BACT determinations for a given engine may vary from district to district. Further, many BACT determinations for internal combustion engines are based on the engine being a stationary source. The control technologies identified as BACT for stationary engines may not be feasible for the same engine if it were portable (due to issues such as transportability, engine loading, and conditions under which the equipment is operated.)

To harmonize the different requirements of section 41754 consistent with established district practice that requires BACT for new sources and RACT/BARCT for existing sources, ARB staff interprets the BACT requirement to apply only to new emission sources. Consequently, the terms resident (defined below) and non-resident were created. Non-resident engines (engines new to California) would be subject to BACT. Resident engines (engines currently operating or residing in California) would be subject to RACT/BARCT.

The proposed Regulation defines resident engine as follows:

A resident engine is:

1. *a portable engine that at the time of applying for registration, has a current, valid district permit or registration issued in accordance with local district requirements on or before [the effective date of this regulation]; or*
2. *a portable engine that resided in the State of California at any time during calendar year 1995 and an application for registration is submitted to the Executive Officer no later than one year from [the effective date of the regulation]; or*
3. *a portable engine where a permit or registration has not been granted by a district, but an application, accepted and deemed complete by the district, prior to [the effective date of the regulation], and an application for registration is submitted to the Executive Officer no later than one year from [the effective date of the regulation]; or*
4. *a portable engine where registration becomes mandatory pursuant to section 2451(d) of this regulation.*

Resident engines are engines that have resided or have a history of operating in California. Non-resident engines are engines that are new to California, (i.e., have been operated outside of California or are newly manufactured).

In order to qualify as a resident engine, an owner and/or operator must prove to the Executive Officer that the engine meets the residency requirements of the Statewide Registration Program. Examples of adequate proof of residency are existing permits issued by an air district, tax records, and usage or maintenance records.

Qualification for participation in the Statewide Registration Program as well as specific emission limitation requirements are summarized in Table III-1. Portable engines registered in the Statewide Registration Program may be required to meet daily, annual, or pollutant concentration emission limits depending on the resident status of the engine, the type of emission control devices it employs, the date the engine was manufactured, and if the engine or equipment unit is operated in the South Coast Air Quality Management District (SCAQMD).

e. Mass Emission and Concentration Limits and/or Control Technology Requirements

Registered portable engines must have specific emission control equipment installed, or

meet specific pollutant emission limits. These emission limits vary depending on engine size and resident status (see Table III-2 for compression-ignition engine requirements or Table III-3 for spark-ignition engine requirements). The emission control technology requirements depend on engine size, resident status, and type of fuel used. Requirements for diesel-powered engines include one or more of the following technologies: turbocharger, intercooler/aftercooler, and 4-degree fuel injection retard. Spark-ignition engines must meet specific pollutant concentration limits, or in the case of resident engines, employ a catalyst.

For compression-ignition engines, 4-degree injection timing retard is not required if it can be demonstrated, to the satisfaction of the Executive Officer, to be technologically infeasible. Examples of documentation necessary to make a demonstration include, but is not limited to, a manufacturer's statement along with appropriate documentation that such a modification is technologically infeasible, a cost effectiveness study, or an engineering analysis showing a high probability of engine damage. Any exemption shall be granted by the Executive Officer on a case-by-case basis for specific engine classes or categories and may require a lesser amount of injection timing retard (e.g., 3-, 2- or 1-degrees) as determined appropriate.

f. Dredges

Historically, districts have established more stringent emission control requirements for dredging operations, which are energy-intensive processes. Selective Catalytic Reduction (SCR) has been shown to be effective for engines that operate at fairly constant rotations per minute (rpm) over the course of the day. Engines used in operations where loading varies typically do not maintain a constant exhaust temperature necessary for the SCR unit to operate properly. Hydraulic dredge engines were found to maintain constant rpm over the course of a day. As a result, some districts require SCR as BACT for dredge engines that operate on a continuous basis.

In order to ensure the requirements of the Statewide Registration Program are uniform statewide, the most stringent BACT requirements were preserved for each class or category. The proposed Regulation requires only dredge engines that operate on a continuous basis on any given day (i.e., hydraulic dredges), to install SCR or other control technology to achieve 1.7 g NO_x/bhp-hr. Dredges which operate intermittently are required to meet the limitations established in section 2455 through 2456 of the proposed Regulation.

**Table III-1
Summary of Statewide Registration Program Requirements for Portable Engines**

	Resident Engines	Non-resident Engines	Military	New Construction < 175 bhp¹
Qualifications	<ul style="list-style-type: none"> - valid operating permit or registration from district by the effective date of the regulation, and an application for registration is filed prior to January 1, 2001, or - the engine resided in California during 1995, and an application is filed within one year of effective date of regulation, or - a complete permit or registration application is filed with the district by the effective date of the regulation, and an application is filed within one year of effective date of regulation, or - registration under the Statewide Registration Program is mandatory, and an application is filed before January 1, 2001. 	<ul style="list-style-type: none"> - the engine does not qualify as resident 	<ul style="list-style-type: none"> - tactical support equipment only 	<ul style="list-style-type: none"> - Meets definition of CFR 40 part 85, Subpart Q, section 85.1601 et seq.

1. Construction >175 bhp subject to applicable resident/non-resident engine requirements of proposed Regulation.

Table III-1

**Summary of Statewide Registration Program Requirements for Portable Engines
(continued)**

	Resident Engines	Non-resident Engines	Military	New Construction < 175 bhp¹
Daily and Annual Emissions Limitations	<u>restricted to:</u> - 10 tons of each pollutant per district per year per engine - 100 pounds NOx per day per project in SCAQMD only - 550 pounds per day of CO - 150 pounds per day of PM ₁₀	- same requirements as resident engines, <u>plus</u> - 100 pounds NOx per day per engine in all other districts	- no requirements	same as resident and non-resident
Other Requirements	- California reformulated fuel must be used - Ringlemann 1 opacity restriction - 0.1 grains PM ₁₀ limit ²	- same requirements as resident engines	- Ringlemann 2 opacity restriction	- California reformulated fuel must be used

1. Construction >175 bhp subject to applicable resident/non-resident engine requirements of proposed Regulation.
2. Emission requirements and 0.1 grains PM₁₀ limit do not apply for engines meeting emission standards set forth in Title 13 of the California Code of Regulations or CFR 40 part 89.

**Table III-2 Statewide Registration Program Requirements for
Compression-ignition Engines***

Rated Brake Horsepower	Resident Engine	Non-resident Engine
50-116	810 ppm _{dv} NO _x (10.5 g/bhp-hr)** or turbocharger or 4-degree injection timing retard***	770 ppm _{dv} NO _x (10.0 g/bhp-hr)** or turbocharger and 4-degree injection timing retard***
117-399	770 ppm _{dv} NO _x (10.0 g/bhp-hr)** or turbocharger and aftercooler/intercooler or 4-degree injection timing retard***	550 ppm _{dv} NO _x (7.2 g/bhp-hr)** or turbocharger and aftercooler/intercooler and 4-degree injection timing retard***
400-749	550 ppm _{dv} NO _x (7.2 g/bhp-hr)** or turbocharger and aftercooler/intercooler or 4-degree injection timing retard***	535 ppm _{dv} NO _x (7.0 g/bhp-hr)** or turbocharger and aftercooler/intercooler and 4-degree injection timing retard***
750+	550 ppm _{dv} NO _x (7.2 g/bhp-hr)** or turbocharger and aftercooler/intercooler or 4-degree injection timing retard***	535 ppm _{dv} NO _x (7.0 g/bhp-hr)** or turbocharger and aftercooler/intercooler and 4-degree injection timing retard***

- * These requirements are in addition to requirements of sections 2455 and 2456 of proposed Regulation.
- ** For the purpose of compliance with this article, ppm_{dv} is parts per million NO_x as NO₂ @ 15 percent oxygen averaged over 15 consecutive minutes. Limits on ppm_{dv} are the approximate equivalent to the stated grams per brake horsepower hour limit based on assuming the engine is 35 percent efficient.
- *** Requirements for 4-degree injection timing retard is not required where it can be demonstrated technologically infeasible to the satisfaction of the Executive Officer. (Refer to section 2456 of proposed Regulation, paragraph h)

Table III-3 Statewide Registration Program Requirements for Spark-ignition Engines*

Engine Status	Pollutant Emission Limits or Control Technology		
	NO_x	VOC	CO
Resident	213 ppm _{dv} NO _x (4.0 g/bhp-hr)** or catalyst***	800 ppm _{dv} VOC (5.0 g/bhp-hr) or catalyst***	25,344 ppm _{dv} CO (288 g/bhp-hr) or catalyst***
Non-Resident	80 ppm _{dv} NO _x (1.5 g/bhp-hr)**	240 ppm _{dv} VOC (1.5 g/bhp-hr)	176 ppm _{dv} CO (2.0 g/bhp-hr)

- * These requirements are in addition to requirements of sections 2455 and 2456 of proposed Regulation.
- ** For the purpose of compliance with this article, ppm_{dv} is parts per million NO_x as NO₂ @ 15 percent oxygen averaged over 15 consecutive minutes. Limits on ppm_{dv} are the approximate equivalent to the stated grams per brake horsepower hour limit based on assuming the engine is 35 percent efficient.
- *** The catalyst must provide a minimum of 80 percent control.

g. Phase-in of Cleaner Technologies

The proposed Regulation requires a scheduled phase-in of cleaner technologies which would result in the reduction and eventual elimination of high-emission engines. All engines are required to meet, through retrofit or replacement, the equivalent emission limitations of a federally- or State-certified new engine (CFR 40 Part 89 or Title 13 of California Code of Regulations) according to the following schedule:

- on or after July 1, 1998, all non-resident engines, regardless of engine manufacture date, registering in the Statewide Registration Program must meet the most stringent emissions standards for the applicable horsepower range specified for State- or federally-certified newly-manufactured engines; if no emissions standards exists, then the applicable requirements contained in Table 1 or Table 2 of the proposed Regulation must be met;
- on or after January 1, 2001, any newly registered portable engine or replacement portable engine, irrespective of residency, must meet current California or federal emissions standard; and
- after January 1, 2010, all portable engines not previously meeting post-1996 California or federal standards must meet the most current California or federal emissions standard.

The above requirements are also summarized in Table III-4.

From the *Off-Road Mobile Equipment Emissions Inventory Estimate Draft Report* (Booze, Allen & Hamilton Incorporated, Jan. 1992) [a draft report prepared for the ARB that characterizes the emission inventory for off-road internal combustion engines in California in the 25 bhp to 500 bhp range] data from a survey found that the expected life of diesel internal combustion engines is a normal distribution with a mean life of approximately 16 years. It is expected that many of the engines currently operating in California will have been naturally retired or would have undergone major overhaul by 2010. The federal and State standards for some engine horsepower ranges begin to take effect as early as January 1, 1996. All horsepower ranges of newly-manufactured engines would be subject to federal or State standards by January 1, 1999. For engines purchased as late as 1995, approximately half would be retired by 2010 and of the engines that remain operating, many would be retired soon after 2010. Many engines purchased prior to 1995 are expected to be retired by 2010. The incentives built into the proposed Regulation would further accelerate retirement of older engines. As a result, it is assumed that a very small percentage of engines that are currently operating in the State would still be in operation, or have a significant useful life remaining by 2010. Therefore, the 2010 phase-in requirement of cleaner engine technologies is an economically and technologically feasible requirement, and would not cause business to prematurely retire or retrofit a significant number of useful engines. The emission benefits of the 2010 phase-in requirement are summarized in Appendix G.

The 2010 deadline for all engines to meet the equivalent emissions of certified engines coincides with the planned ozone attainment date in the South Coast Air Basin. Requiring emission compliance of all engines prior to 2010 was determined not to be economically feasible, because it would cause early retirement or costly retrofit of a large number of engines.

h. Daily Emission Limits

Daily limits are required for portable engines to provide short-term protection of ambient air quality standards. The limits contained in the proposed Regulation are consistent with limits established in the CAPCOA model portable equipment rule. With the exception of TSE, each registered portable engine is limited to 550 pounds per day of carbon monoxide and 150 pounds per day of PM₁₀. Because the SCAQMD is the only district that is nonattainment for the federal ambient air quality standard for nitrogen dioxide, registered portable engines may not emit more than 100 pounds per day of NOx per project (additional discussion follows) when operated in the SCAQMD. Non-resident portable engines may not emit more than 100 pounds per day of NOx anywhere in the State. Any registered engine with emissions less than or equal to the most stringent federal or State standards set forth in CFR 40 Part 89 or Title 13 of the California Code of Regulations for engines of that rating at the time of registration is exempt from daily emission limits. Equipment units registered under the Statewide Registration Program would be limited to 82 pounds per day of PM₁₀. Equipment units with emissions above this level would be classified as a stationary source under federal law. The daily limits established in the regulation reflect the typical threshold contained in federal NSR and Prevention of Significant Deterioration Program (PSD) rules and regulations. By keeping equipment unit emissions below the specified threshold, federal stationary source program requirements would not be triggered.

The proposed Regulation defines “project” as follows:

one or more registered portable engines and equipment units operated at one location under the same or common ownership or control, and used to perform a single activity.

In the SCAQMD, each project is restricted to emitting less than 100 pounds of NOx per day. The 100 pounds per day emission limit pertains to each activity, not the entire process. For example, at a fracturing process site there are a number of distinct activities being performed such as pumping, blending, and sand transfer. Each activity (such as sand transfer) is considered a distinct project and limited to 100 pounds NOx per day. Any **portable engine** meeting an applicable emissions standard, as set forth in Title 13 of the California Code of Regulations, CFR 40 Part 89, is exempt from the daily and annual emission limits.

**Table III-4
Summary of Statewide Registration Program Technology Requirements for Portable Engines**

Year	Resident Engines	Non-resident Engines	Military	New Construction < 175 bhp¹
1996	<ul style="list-style-type: none"> - RACT/BARCT as specified in section 2456 of the proposed Regulation - equivalent or identical engine replacements allowed 	<ul style="list-style-type: none"> - engines manufactured during or after 1996 must meet California or federal standards. BACT, as specified in section 2456 of the proposed Regulation, is required where California or federal standard is not in effect - engines manufactured prior to 1996, must meet BACT as specified in section 2456 of the proposed Regulation - equivalent or identical engine replacements allowed 	-no technology requirements	-no technology requirements
1998	<ul style="list-style-type: none"> - RACT/BARCT as specified in section 2456 of the proposed Regulation - equivalent or identical engine replacements allowed 	<ul style="list-style-type: none"> - newly registered engines, regardless of engine manufacture date, must meet the most stringent California or federal standards in effect for the applicable horsepower range, if no standard exists for the applicable horsepower range then BACT as specified in section 2456 of the proposed Regulation - equivalent or identical engine replacements allowed 	- no technology requirements	- no technology requirements

1. Construction >175 bhp subject to applicable resident/non-resident engine requirements of proposed Regulation

**Table III-4
Summary of Statewide Registration Program Technology Requirements for Portable Engines
(continued)**

Year	Resident Engines	Non-resident Engines	Military	New Construction < 175 bhp¹
2001	<ul style="list-style-type: none"> - engines can no longer be registered as resident engines. Newly registered engines must meet non-resident requirements - no equivalent or identical engine replacements allowed 	<ul style="list-style-type: none"> - newly registered engines must meet most stringent California or federal standards - no equivalent or identical engine replacements allowed 	<ul style="list-style-type: none"> - no technology requirements 	<ul style="list-style-type: none"> - no technology requirements
2010	<ul style="list-style-type: none"> - existing registered engines not previously meeting post-1996 California or federal standards must retrofit to meet most current California or federal standards - newly-registered engines must meet the most stringent California or federal standards 	<ul style="list-style-type: none"> - same requirements as resident engines 	<ul style="list-style-type: none"> - no technology requirements 	<ul style="list-style-type: none"> - no technology requirements

1. Construction >175 bhp subject to applicable resident/non-resident engine requirements of proposed Regulation

i. Annual Emission Limits

Annual limits were established as a condition of registration in order to avoid Title V federal operating permit requirements for stationary sources. In addition, because offsets are not required under the Statewide Registration Program an annual limit was established for portable engines to minimize the potential impacts of the Statewide Registration Program. With the exception of military tactical support equipment, registered portable engines may not emit more than 10 tons of any criteria pollutant in any one air district per year. Any registered engine with emissions less than or equal to the most stringent federal or State standards set forth in CFR 40 Part 89 or Title 13 of the California Code of Regulations for engines of that rating at the time of registration is exempt from annual emission limits. Any **portable engine** meeting an applicable emissions standard, as set forth in Title 13 of the California Code of Regulations, CFR 40 Part 89, is exempt from the daily and annual emission limits.

j. Nonroad Regulation Exemption

As discussed earlier in this report, the federal CAA preemptions limit how new portable engines can be regulated by the State of California and districts. In drafting the proposed Regulation, care was taken to ensure that the requirements and provisions do not conflict with the federal preemptions.

k. Incentive Exemption

The purpose of the incentive exemption is to encourage owners and/or operators of portable engines to more rapidly retire older, higher emitting engines in exchange for temporary relief from daily and annual emissions limits. To participate, the owner and/or operator would agree, through the submission of a compliance plan, as specified in the proposed Regulation, to replace or modify an existing registered engine to meet the most stringent federal or State standards set forth in CFR 40 Part 89 or Title 13 of the California Code of Regulations for engines of that rating. Upon completion of the replacement or modification the engine would be free to operate without emission restrictions (pounds per day or tons per year).

l. Engines less than 50 bhp

Except for military tactical support equipment, a registered portable engine with a rating of less than 50 bhp shall comply with the most stringent requirements for that rating set forth in CFR 40 Part 91 or Title 13 of the California Code of Regulations, if one exists for that engine rating at the time of application for registration. Most districts do not require permits for engines rated at less than 50 bhp. Since registration is voluntary for most engines, an owner or operator would only seek registration for engines rated less than 50 bhp if a permit were required from a district.

3. Equipment Units

The proposed Regulation distinguishes an equipment unit as a piece of equipment that emits air contaminants over and above those emitted from the portable engine and is associated with, and driven solely by, a portable engine. Further, equipment units may include equipment necessary for the operation of portable engines (e.g., fuel tanks). Equipment units are eligible for registration as part of the Statewide Registration Program. However, equipment units are considered stationary sources under federal law, and may be subject to federal requirements. To avoid conflicts between the Statewide Registration Program and federal programs, equipment units subject to certain programs are not eligible for registration. Any equipment unit subject to an applicable New Source Performance Standard, Maximum Achievable Control Technology standard, or National Emissions Standard for Hazardous Air Pollutants is not eligible for registration under the Statewide Registration Program. In addition, any equipment that is determined to be a permanent part of a stationary source permitted by a district would not be eligible for registration. This is to avoid potential conflicts with federal New Source Review, Prevention of Significant Deterioration and Title V requirements. Qualifications for equipment units to participate in the Statewide Registration Program are summarized in Table III-5.

**Table III-5
Summary of Statewide Registration Program Requirements for Portable Equipment Units**

Qualifications	- associated with, and driven solely by, a portable engine
Technology Requirements	- BACT as specified in section 2457 of the proposed Regulation
Emission Requirements	- 82 pounds per day of PM ₁₀ - 10 tons pollutant per district per year per equipment unit
Other Requirements	- Ringlemann 1 opacity restriction (unless otherwise specified) - Notify U.S. EPA when operating within 15 km of a Class I Area

a. Specific Limitations

Operation of an equipment unit near a Class I Area may trigger the requirements of the federal Prevention of Significant Deterioration Program (PSD). Prior to commencing operation of a registered equipment unit within 15 kilometers from the outer boundary of a Class I Area, as

defined under Title I, Part C of the CAA, the owner and/or operator must notify the U.S. EPA and comply with applicable provisions of the PSD program.

Portable equipment units shall emit less than 82 pounds PM₁₀ per day to avoid conflict with federal permitting requirements. The 82 pounds per day is equivalent to 15 tons per year which is the threshold used in federal programs. Similarly, portable equipment units are prohibited from emitting more than 10 tons per year of any criteria pollutant in any one district to avoid requirements of Title V (federal operating permits). In meeting the intent of HSC section 41753, the proposed Regulation establishes the 10 tons per year limit uniformly statewide to avoid triggering Title V requirements in the South Coast Air Quality Management District. The 82 pounds per day limit is established to avoid triggering any federal program requirements, such as New Source Review and Prevention of Significant Deterioration. In no event can a registered equipment unit exceed either the 82 pounds per day or 10 tons per year limits.

b. Specific Requirements for Registered Equipment Units

Equipment units eligible for registration are subject to the following requirements listed by type of operation.

i. Confined Abrasive Blasting Operations

- No air contaminant will be discharged into the atmosphere for more than three minutes total in any one hour as dark or darker than Ringlemann 1 or 20 percent opacity.
- Particulate matter emissions must be controlled using a fabric or cartridge filter dust collector.
- The applicant will provide manufacturer's specifications or engineering data to demonstrate a minimum particulate matter control of 99 percent for the dust collection equipment (meaning the filter captures and inhibits the release of 99 percent of the dust produced by the equipment units).
- Except for vent filters, each fabric dust collector must be equipped with an operational pressure differential gauge to measure the pressure drop across the filters.

ii. Concrete Batch Plants

- All dry material transfer points must be ducted through a fabric or cartridge-type filter dust collector (unless there are no visible emissions from the transfer point).
- All cement storage silos must be equipped with fabric- or cartridge-type vent filters.
- The silo vent filters must be maintained in proper operating condition.
- No air contaminant will be discharged into the atmosphere for more than three minutes total in any one hour as dark or darker than Ringlemann 1 or 20

percent opacity.

- Open areas must be kept wet enough to prevent dust emissions from exceeding 20 percent opacity or Ringlemann 1.
- Silo service hatches must be dust-tight.
- The applicant will provide manufacturer's specifications or engineering data to demonstrate a minimum particulate matter control of 99 percent for the dust collection equipment.
- Except for vent filters, each fabric dust collector must be equipped with an operational pressure differential gauge to measure the pressure drop across the filters.

iii. Sand and Gravel Screening, Rock Crushing, and Pavement Recycling and Crushing, Operations

- No air contaminant will be discharged into the atmosphere for more than three minutes total in any one hour as dark or darker than Ringlemann 1 or 20 percent opacity.
- No visible emissions are allowed beyond the property line on which the equipment unit is being operated.
- All transfer points must be ducted through a fabric or cartridge type filter dust collector, or equipped with a wet suppression system maintaining a minimum moisture content of 4 percent by weight.
- Particulate matter emissions from each crusher must be ducted through a fabric dust collector, or ducted through a wet suppression system which maintains a minimum moisture content of 4 percent by weight.
- All conveyors must be covered, unless the material being transferred does not result in any visible particulate matter emissions.
- All stockpiled material must be maintained at a minimum moisture content of 4 percent by weight, unless the stockpiled material does not result in any visible particulate matter emissions.
- The applicant must provide manufacturer's specifications or engineering data to demonstrate a minimum particulate matter control of 99 percent for the dust collection equipment.
- Fabric dust collectors must be equipped with an operational pressure differential gauge to measure the pressure drop across the filters (except for vent filters).

iv. Unconfined Abrasive Blasting Operations

- No air contaminant will be discharged into the atmosphere for more than three minutes total in any one hour as dark or darker than Ringlemann 1 or 20 percent opacity.
- Only California ARB-certified abrasive blasting material shall be used.

- Abrasive material shall not be reused.
- No air contaminant shall be released into the atmosphere which causes a public nuisance.
- All applicable requirements of Title 17, California Code of Regulations apply.

4. Recordkeeping and Reporting Requirements

California Health and Safety Code section 41754 requires that recordkeeping and reporting requirements established in the Statewide Registration Program be the minimum that is necessary to provide sufficient emission inventory data and allow adequate enforcement of the program. ARB staff, in consultation with the AB 531 Portable Equipment Workgroup have determined that to satisfy this requirement, owners of registered portable engines and equipment units must maintain daily operational records and submit to the ARB an annual report consisting of quarterly summaries of operations. Although quarterly summaries are to be submitted annually, daily recordkeeping is required to provide enforceability of daily emission limit requirements established in the regulation. The ARB or districts may request copies of daily records at any time to ensure daily limits are being complied with. Annual reports would be used to generate emission estimates for the emission inventory and ensure compliance with annual limits established in the regulation. Separate recordkeeping and reporting requirements have been established for military tactical support equipment and rental operations. Any **portable engine** meeting an applicable emissions standard, as set forth in Title 13 of the California Code of Regulations, or CFR 40 Part 89, is exempt from the recordkeeping and reporting requirements.

a. Daily Records

Daily records are to be maintained by the engine owner at a central location for two years, and made available to the Executive Officer or districts upon request. The intent of maintaining the records at a central location is to ensure complete records are maintained and to facilitate the timely collection and submittal of such information to the ARB or district upon request. Daily records must include all of the following:

- engine or equipment unit's Statewide Registration Program number;
- month, day, year;
- districts where the engine or equipment unit was operated or county or specific geographic location; and
- the total fuel used and an estimate of hours of operation, or the actual hours of operation, or process weight or throughput and hours of operation.

b. Annual Reporting

At the end of each calendar year, the owner and/or operator of a registered portable engine or equipment unit shall compile daily records kept through the course of the year into quarterly summaries based on calendar quarters. Quarterly summaries are to consist of totals for

each district, where operation occurred, of the total fuel used and estimated hours of operation; or total actual hours operated; or total material processed or produced and hours of operation. The quarterly summaries are to be compiled into an annual report and submitted to the ARB no later than March 1 of each year.

c. Rental Business

The Statewide Registration Program regulation defines “rental business” as follows:

Rental business means a business where the principal use of its engines or equipment units is to temporarily rent or lease for profit, portable engines and equipment units to operators other than the owner(s) of the engine and equipment unit.

In an effort to recognize the unique problems associated with rental operations, a separate recordkeeping and reporting system has been established for rental operations. Unlike other operations seeking registration under the Statewide Registration Program, rental engine and equipment unit owners have no control over the operation of equipment once it leaves the rental yard. The ability to maintain accurate daily records is limited to a renter’s willingness to record and submit information to the owner. The owner has no way to determine the validity or accuracy of information submitted.

Although the requirements for daily recordkeeping and annual reporting remain for rental operations, the procedure for collecting daily records and the division of responsibility differs from other operations registered under the Statewide Registration Program. The responsibility for recordkeeping is split between the owner of the registered engine or equipment unit and the renter. At the time of rental, the owner is required to provide the renter a written copy of the applicable requirements of the proposed Regulation, operating conditions issued with the registration, and specific recordkeeping requirements. Upon return of the rental engine or equipment unit, the owner is responsible for collecting any records kept by the renter, or, if no records were maintained, query the renter to obtain as much information as possible to fulfill the recordkeeping requirements of this regulation. The owner is responsible for maintaining records for each rental transaction and at a minimum should include all of the following information:

- the engine or equipment unit’s Statewide Registration Program number;
- the date the portable engine or equipment unit left the rental yard, and the date it returned;
- the location where the engine or equipment unit was used (district, county, or specific location);
- the hours of operation for each rental period, and an estimation of hours per day the engine or equipment unit is operated; and
- a written acknowledgment by each renter that they received a written copy of the requirements as specified above.

The proposed Regulation requires the installation of non-resettable time meters on engines registered under the program. An alternate method of collecting engine operational data may be used upon approval by the Executive Officer. Examples of alternate methods include the use of fuel meters or more intensive recordkeeping requirements to ensure accurate data is collected.

Annual reporting is the same for rental as for other registered engines and equipment units. The owner of registered engines and equipment units would be responsible for submitting annual reports of quarterly summaries to the ARB.

d. Military Tactical Support Equipment

For registered TSE, each military installation must report to the ARB the number, type, and horsepower rating of registered TSE residing at the installation during the previous calendar year, by March 1 of each year. The annual report supplied by the military installation shall reveal any change in the number of TSE at the military installation. Applications and applicable fees for the new TSE must be submitted to the ARB with the March 1 report.

5. Notification Requirements

Portable engines and equipment units registered under the Statewide Registration Program can operate in any district within California. Because much of this equipment is expected to operate only a short period of time at each location, districts would have a difficult time tracking the operation and location of registered engines and equipment units for the purposes of enforcement. Notification requirements are specified in the proposed Regulation to assist districts with the enforcement of the program. Owners and/or operators of registered portable engines and equipment units or in the case of rental equipment, the renter, must notify the local district if the engine or equipment unit is expected to be operated for longer than five days within the district. In the case where the portable engine or equipment unit was originally intended to be operated less than five days, engine owners have 12 hours to notify the local district after it is discovered that the operation would run over five days. Owners or operators of registered engines and equipment units are required to notify the district air pollution control officer or designee. A list of district contact numbers is contained in Appendix H. This list would be kept up to date and available on ARB's home page on the Internet as well as in hard copy. Owners or operators of registered engines and equipment units must provide the district with the Statewide Registration Program number of the engine or equipment unit, the name and phone number of a contact person with information concerning the location of the engine or equipment unit, and the estimated amount of time the engine or equipment unit would be operating in the district.

a. Designation of Home District

At the time of registration, an owner and/or operator may designate a home district in which the engine or equipment unit resides or where the engine or equipment unit is anticipated to operate most of the time. Owners do not have to notify the district when the engine or equipment unit is operating in the home district. A list of sources and the designated home district would be made available for district use. Since notification is not required when operating in a home district, districts would be responsible for contacting sources that have designated them as a home district in order to locate engines and equipment units for inspection purposes.

b. Rental Business

The requirement for notification is the responsibility of the renter of the registered portable engine or equipment unit. The proposed Regulation defines renter as a person who rents a portable engine or equipment unit from a rental business. In order to minimize the impacts of multiple notifications at the district level, notification requirements for rental engines would not be required for portable engines rated at less than 200 bhp. For rental engines rated at greater than 200 bhp, all notification requirements as listed above are applicable.

c. Military Tactical Support Equipment

Because TSE typically operates within the confines of a military installation, the notification requirements of proposed Regulation do not apply. Each district, with a military installation within its jurisdiction can contact the installation directly in order to locate and inspect TSE.

D. ADMINISTRATIVE PROCEDURES

The ARB would receive and evaluate applications and administer the Statewide Registration Program. The following discussion explains how the owner of a portable engine or equipment unit applies for and retains registration. Registration options such as “equivalent,” “identical replacement,” and “non-operational” are also discussed.

1. Application

Portable engine or equipment unit registration is available only through the ARB. Equipment owners and/or operators may apply for registration the following ways:

- by Internet to the ARB’s home page at *http://www.arb.ca.gov*
- in person from the ARB’s Public Information Office located on the first floor of the ARB’s headquarters building at *2020 L Street, Sacramento, California*
- by writing the ARB at *Air Resources Board*

*Stationary Source Division
Attn: Statewide Registration Program
P.O. Box 2815
Sacramento, CA 95812*

The ARB would receive applications, issue registrations, and administer the Statewide Registration Program. Applicants must provide sufficient information for the ARB's Executive Officer to determine if engines and equipment units can comply with the registration requirements contained in the proposed Regulation.

The following information is required, at a minimum, to determine if a portable engine or equipment unit is eligible to register in the Statewide Registration Program:

- name of registration applicant, including the name of a contact person, mailing address, and telephone number;
- engine or equipment unit status (resident, non-resident, non-operational, rental, or military);
- for resident engine, a copy of current district permit-to-operate or registration certificate, or other proof of California residency;
- a brief description of how the engine or equipment unit is typically used;
- engine description (including make, model, manufacture year, rated brake horsepower of engine, emission control equipment, and serial number);
- equipment unit description (including make, model, serial number, process rate or throughput capacity, and emission control equipment);
- necessary test data (engineering data, test data, or manufacturer's emissions data) to demonstrate compliance with the requirements as specified in sections 2455-2457 of the proposed Regulation; and
- signature of responsible official and date of signature.

The application and information about the Statewide Registration Program are available from the Internet. However, the actual completed application and associated fees must be filed with the ARB either in person or by mail. Detailed information about the engine or equipment unit being registered may be submitted in an electronic format, however, the actual application with responsible official signature must be a hard copy. To submit electronic information the applicant must refer to the actual application for details and/or contact the appropriate ARB staff listed on the application.

2. Registration

Once an application for registration is filed with the ARB, staff would make a determination of the completeness of the application and notify the applicant in writing. In

anticipation of a large number of applications, during the first year of the Statewide Registration Program an applicant shall be notified within 45 days of receipt. After the first year, notification shall occur within 30 days. In the event that an application is determined to be incomplete, the specific information needed to complete the application would be identified in the written notice. Upon deeming an application complete registration must be issued or denied within 180 days during the first year, and within 90 days after the first year.

For the purposes of enforcement, registered engines and equipment units would be issued registration identification along with the registration package. The registration package would also include the registration certificate with operating conditions. The registration identification would have a unique identification number for each registered engine or equipment unit. The registration identification is to be maintained on the registered portable engine or equipment unit in an easily visible location. The registration identification would allow for identification of the engine or equipment unit and enable an inspector to verify that the engine or equipment unit is registered under the Statewide Registration Program. A copy of the registration certificate, operating conditions, and current status can be obtained via the Internet using the Statewide Registration Program identification number. Failure to maintain proper identification on a registered engine or equipment unit is a violation of the requirements of the Statewide Registration Program.

3. Renewals

Registration and subsequent renewal are valid for three years. During the first year of the Statewide Registration Program, the ARB staff expects to receive a large number of applications. If all of the initial registrations are issued in a short time frame, they would all expire at about the same time. When it is time to renew the registrations, owners may experience delay in receiving renewals because of this workload inequity. To prevent this scenario, ARB staff proposes to initially issue some registrations that are valid for more than three years. Making some of the initial registrations valid for four or five years would spread the renewal workload over each year.

ARB staff would mail a renewal notice and invoice at least 60 days prior to the date the registration expires. Renewal of registration and payment of fees would be through the ARB. If the renewal fee is not submitted within 30 days of receiving the renewal notice, fee penalties for late payments would be assessed. Failure to pay renewal fees accrued within 90 days of receiving notice may result in cancellation of registration. Portable engines or equipment units without valid registration under the Statewide Registration Program are subject to applicable local district rules and regulations.

4. Change of Ownership

Changes in ownership of registered portable engines and equipment units require the new owner to notify the Executive Officer within three working days after the change. The registration status is not affected if the engine or equipment unit is not modified. However, an

administrative fee of \$15 per unit is required to update records to reflect the change of ownership. The following information must be submitted:

- engine or equipment unit registration number;
- previous owner's name;
- new owner's name;
- new contact person (including mailing address and telephone number); and
- new home district (if applicable).

5. Procedure for Identical and Equivalent Replacements of Registered Portable Engines

The proposed Regulation allows for identical and equivalent replacement of existing registered engines and equipment units until July 1, 2001. On or after this date, the equivalent replacement of a portable engine or equipment unit would be subject to the requirements of the proposed Regulation in effect at the time of replacement.

a. Identical Replacement

A registered portable engine or equipment unit may be considered an identical replacement for the purposes of complying with the proposed Regulation if all of the following are true:

- the replacement engine or equipment unit has the same manufacturer, model number, and rated brake horsepower as the original engine;
- the replacement engine or equipment unit is intended to perform the same or similar function as the original engine;
- the replacement engine or equipment unit has equal or lower emissions (expressed as mass per unit time) as the original engine; and
- the replacement engine or equipment unit meets the emission and technology requirements of the regulation.

An engine or equipment unit meeting all the requirements for identical replacement may begin operating immediately upon replacement. Notification shall be made to the ARB within five days of making the replacement and shall include company name, contact, phone number, registration certificate number of engine or equipment unit replaced; make, model, rated bhp, serial number of identical replacement engine or equipment unit, and applicable fees as required by the proposed Regulation in section 2461.

b. Equivalent Replacement

The proposed Regulation defines equivalent replacement as follows:

Equivalent Replacement means a substitution of one or more registered

portable engine(s) or equipment unit(s) with a portable engine or equipment unit that is intended to perform the same or similar function as the original portable engine or equipment unit, and where the following conditions exist:

- 1 the replacement engine or equipment unit results in equal or lower air contaminant emissions than the existing engine or equipment unit (or sum of existing engines or equipment units) expressed as a mass per unit time (limitations on capacity or hours of operation shall not be taken into account in qualifying for lower air contaminant emissions);*
- 2 the replacement engine or equipment unit meets the emission control technology requirements of this article contained in sections 2456 and 2457 [of the proposed Regulation];*
- 3 the rated brake horsepower of the replacement engine does not exceed the rated brake horsepower of the existing engine (or sum of existing engines), by more than 20 percent. For every percentage point increase of the rated brake horsepower, there shall be an associated decrease in emissions of nitrogen oxides, expressed as a mass per unit time, equal to or exceeding two percentage points; and*
- 4 the manufacturer's maximum rated capacity of the replacement equipment unit does not exceed the maximum rated capacity of the existing equipment unit.*

A registered portable engine or equipment unit or group of engines or equipment units may be replaced by a single engine or equipment unit, considered an equivalent replacement, if all of the following are true:

- the replacement engine or equipment unit is intended to perform the same or similar function as the original engine(s);
- the replacement engine or equipment unit results in equal or lower air contaminant emissions than the existing engine or equipment unit (or sum of existing engines or equipment units) expressed as a mass per unit time (limitations on capacity or hours of operation shall not be taken into account in qualifying for lower air contaminant emissions);
- the replacement portable engine or equipment unit meets the emission control technology requirements of sections 2455 through 2457 of the proposed Regulation;

- the rated brake horsepower of the replacement engine(s) does not exceed the rated bhp of the existing engine(s) (or sum of existing engines), by more than 20 percent; for every percentage point increase of the rated bhp the associated decrease in air contaminant emissions expressed as a mass per unit time, shall decrease by 2 percentage points; and
- the manufacturer's maximum rated capacity of the replacement engines or equipment units does not exceed the maximum rated capacity of the existing engines and equipment units.

Example: Consider an owner and/or operator who wishes to replace an engine registered as a resident engine that is rated at 200 bhp (or two resident engines each rated at 100 bhp). The same model engine is currently only sold as a 220 rated bhp version, but the emission of air contaminants expressed as a mass per unit time has decreased from 15 grams per bhp hour to 12 grams per bhp hour. The increase in rated bhp is 10 percent $[(220/200)-1=0.1]$ (which is less than the 20 percent increase that is allowed). The associated decrease in air contaminants is 20 percent $[(12/15)-1=-0.2]$ (which is a 2 percent decrease in air contaminants for every 1 percent increase in horsepower). Therefore, the owner and/or operator would be allowed to make an equivalent replacement and maintain the residential status of the engine being replaced.

The owner and/or operator of an engine or equipment unit meeting all the requirements of equivalent replacement must file an application with appropriate fees with the ARB prior to operation of the equivalent replacement engine or equipment unit.

6. Non-operational Engines and Equipment Units

In response to affected industry requests, provisions have been included in the proposed Regulation to allow for the registration of non-operational engines or equipment units. The proposed Regulation defines "non-operational" as follows:

Non-operational means a portable engine or equipment unit that an owner or operator has demonstrated to the satisfaction of the ARB's Executive Officer as residing in the State but not operating. A portable engine or equipment unit determined to be non-operational may not operate under the Statewide Registration Program.

The advantages of registering engines and equipment units as non-operational are to maintain qualification status as resident for engines and to reduce the costs of registration to the owner and/or operator when equipment is not being operated and therefore not generating revenues.

When an owner registers an engine or equipment unit as non-operational, the owner agrees that the engine or equipment unit would not operate until approval to operate is received from ARB.

Owners registering engines and equipment units as non-operational may wish to have an engine or equipment unit evaluated at the time of application to determine if it meets all of the requirements of the Statewide Registration Program. An initial eligibility evaluation enables owners to change the status from non-operational to operational and begin operating immediately without experiencing application processing delays. Without initial evaluation, non-operational engines and equipment units that are intended to become operational would be subject to an eligibility evaluation prior to approval of operation. Non-operational engines and equipment units registered with an initial eligibility evaluation are charged a higher initial registration fee than where no initial evaluation is performed.

If at the time of renewal, an engine or equipment unit is not expected to operate for an extended period of time, the owner and/or operator may choose to renew registration as non-operational. Only during initial registration and the renewal process may registration status be changed from operational to non-operational. An owner and/or operator of a registered engine or equipment unit can go from non-operational to operational at any time, upon approval by the Executive Officer.

E. FEE STRUCTURE

California Health and Safety Code section 41752 allows the ARB to establish a schedule of fees to be assessed for registration and renewal of registration of portable engines and equipment units. The schedule of application fees contained in Table III-6 represent ARB staff estimates of fees, which in the aggregate, are expected to be sufficient to cover the reasonable cost of administering the Statewide Registration Program. Fees for the Statewide Registration Program are, in most cases, lower than those of district permitting or registration programs. In cases where engines and equipment units are operated in more than one district, the one-time Statewide Registration Program fee would be significantly less than those additive fees assessed by multiple districts.

1. Initial Registration

The \$90 registration fee covers the cost to process an application and enter applicable information in the ARB database. ARB staff estimate that staff time necessary to process an application for registration would average 1.5 hours. The average time spent multiplied by the estimated staff time rate of \$60 per hour equals the \$90 registration fee. To distribute the renewals of the portable engine and equipment units registered, the initial registration may be valid for more than 3 years. If an engine or equipment unit is valid for more than 3 years, an additional prorated fee of \$30 per year for registration would be assessed. For portable engine

and equipment units already evaluated and listed in the ARB database, owners and or operators of subsequent identical portable engine and equipment units seeking registration would not need to submit emissions data. The ARB staff is developing a database that would contain information on each type of portable engine and equipment units of specific make, model, and control devices that are registered in the Statewide Registration Program.

Fees are based on the actual cost for administering the Statewide Registration Program. The cost of evaluating the first type of a specific make and model or specific control device is included in the \$90 fee. There is no distinction between fees for resident and non-resident engines. Because there are no specific control requirements applicable to TSE, evaluation of the engines and equipment units is unnecessary. The reduced administrative costs to register TSE is reflected in the fee schedule of the regulation.

2. Non-operational Registration

There are two options for registering portable engines and equipment units as non-operational. The first option offers initial eligibility registration of the engines and equipment units at a nominal fee, but later requires the technical evaluation of the engines and equipment units and appropriate fee at the time the owner and/or operator wishes to operate. The second option is to pay for an initial evaluation at the time of registration and then to pay a nominal fee to switch to operational status. The total cost to the applicant is the same regardless of the approach. The advantage to the first option is an initial cost savings when the engines and equipment units are not in operation. For the second option, the advantage is a savings in time when switching to operational status, since the only requirement to operate is to notify the ARB in writing and pay the applicable fees.

Owners and/or operators wishing to register portable engines and equipment units as non-operational without initial technical evaluation, would be assessed an initial fee of \$30 per engine or equipment unit. At the time of switching from non-operational to operational status, an additional \$60 would be assessed.

Owners and/or operators wishing to register as non-operational with the technical evaluation, where evaluation information is already in the ARB database, would be initially charged \$60 per unit. At the time of switching to operational status an additional \$30 administrative charge would be assessed.

3. Renewal

Registration under the Statewide Registration Program is valid for three years, unless otherwise specified. The initial registration fee of \$90 covers operation of a portable engine or equipment unit for the first three years. Subsequent renewal fees are \$90 for each additional renewal period. The \$90 renewal fee equates to \$30 per year and is intended to cover the administrative tasks of implementation of the Statewide Registration Program. ARB staff estimate that an average of 30 minutes per registered engine or equipment unit would be required

to update inventory records, bill for renewal, and other administrative tasks. The three year renewal for non-operational engines and equipment units is \$30. For TSE the renewal fees are \$750 for the first 25 units, or portion thereof, and an additional \$750 for every additional 50, or portion thereof, registered units.

4. Late Fees

Registration and renewal fees must be paid within 30 days of receiving written notice. Late fees would be assessed per engine or equipment unit. If fees are not received within 90 days of the date of written notice, the registration may be revoked. To renew registration after revocation, a new application with appropriate fees must be submitted. Where registration has been revoked, engines and equipment units seeking registration are subject to the requirements set forth in the regulation at the time the application is submitted. Any period of time engines or equipment units are without valid state registration, they are subject to the rules and regulations of any district(s) they operate in.

5. District Inspection Fee

California Health and Safety Code section 41752 requires the ARB, in developing the Statewide Registration Program, to establish a uniform statewide district fee schedule for the recovery of the reasonable costs of district enforcement. A \$75 inspection fee per registered engine or equipment unit has been established in the proposed Regulation. The inspection fee is consistent with the fee approved by the CAPCOA Board of Directors for inclusion in the CAPCOA Model Portable Equipment Registration Rule. Each district can collect the fee only once per year for each registered portable engine or equipment unit inspected. Further, where multiple registered engines or equipment units are inspected at one source the district must charge the lesser of \$75 per registered unit inspected or the actual cost, including staff time, of conducting the inspection.

A district may exceed the one time per year inspection fee when reasonable cause exists to believe that the engine or equipment unit is non-compliant. In this instance, the district can charge for the actual costs, including staff time and any follow-up necessary, for conducting the investigation.

Table III-6 Registration and Renewal Fees for Statewide Registration Program

(Fees are per registered engine or equipment unit except where noted otherwise)

1	Registration	\$90
2	Military tactical support equipment	
a	Registration of first 25 units (or portion thereof)	\$1,500
b	Registration of every additional 50 units (or portion thereof)	\$1,500
3	Non-operational engine or equipment unit	
a	Without initial evaluation	\$30
b	With initial evaluation	\$60
4	Change of status from non-operational to operational	
a	Where initial evaluation has not been previously completed	\$60
b	Where initial evaluation has been previously completed	\$30
5	Identical replacement	\$15
6	Equivalent replacement (treated as a new registration, fees are the same as above for new registration)	
7	Renewal	
a	Every 3 years per registered engine or equipment unit	\$90
b	Prorated yearly per registered engine or equipment unit	\$30
c	Non-operational 3 years (prorated @ \$10/year) per registered engine or equipment unit	\$30
d	Change of status from operational to non-operational plus non-operational renewal	\$45
8	Renewal for Military tactical support equipment	
a	Renewal of first 25 units (or portion thereof)	\$750
b	Renewal of every additional 50 units (or portion thereof)	\$750
9	Penalty fee for late payments per registered engine or equipment unit	
a	30 to 60 days after receiving renewal notice	\$15
b	60 to 90 days after receiving renewal notice	\$30
c	90 days after receiving renewal notice	\$45
10	Modification to registered engine or equipment unit	\$15
11	Change of ownership per registered engine or equipment unit	\$15
12	Replacement of registration identification	\$10
13	District inspection fee per registered engine or equipment unit inspected	\$75*

* Where multiple registered engines or equipment units are inspected at a given source, the district inspection fee shall be equal to the lesser of the actual cost, including staff time, for conducting the inspection or \$75 per registered engine or equipment unit

inspected.

F. INCENTIVES

As discussed previously in this report, ARB staff in consultation with AB 531 Portable Equipment Workgroup included a number of provisions in the proposed Regulation to encourage the early replacement of older, higher emitting engines with newer technologies. The ultimate goal of the Statewide Registration Program is to protect air quality while providing flexibility to owners and/or operators of portable engines and equipment units. This is accomplished through the requirement of Best Available Control Technology for equipment units and the ultimate phase-in of cleaner engine technologies. It is believed that by providing incentives for early, voluntary clean-up of engines, owners and/or operators of portable engines would turn-over existing engine fleets much quicker in exchange for the ability to operate with fewer restrictions.

The two major incentives provided in the Statewide Registration Program are:

- temporary relief (up to 18 months) from daily and annual emissions limits for early voluntary replacement or modification of an existing registered engine; and
- permanent exemption from daily and annual limits upon meeting State or federal standards.

Incentives are not provided for registered equipment units because the requirements are the same over time for each category of source registered and no phase-in of lower emitting technologies is required. Table III-7 summarizes the incentives for using cleaner technologies.

**Table III-7
Statewide Registration Program Incentives for Using
Cleaner Technologies for Portable Engines**

<p>Replace registered engine with California- or federally-certified engine, or retrofit to meet certified engine emission levels</p>	<ul style="list-style-type: none"> - no yearly limits (normally 10 tons per year) for replacement engine - no daily limits (normally 550 lbs/day CO; 100 lbs/day NO_x; 150 lbs/day PM₁₀) for replacement engine - no recordkeeping and reporting for the replacement engine - temporary exemption for registered engine to be replaced <ul style="list-style-type: none"> ~ temporary exemption not to exceed 18 months ~ no daily or yearly limits
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G. ENFORCEMENT

California Health and Safety Code section 41755 requires that districts enforce emission limitations, and emission control requirements as established in the proposed Regulation in the same manner as a district rule or regulation. The ARB is responsible for developing and administering the Statewide Registration Program. Applications for registration would be filed with the ARB where they would be evaluated for compliance with the Statewide Registration Program. Upon determination of compliance, the ARB would issue a registration certificate and identification for each portable engine and equipment unit. The registration certificate would contain conditions for operation which would be used to ensure compliance with the Statewide Registration Program. Districts would be responsible for ensuring that registered engines and equipment units comply with the registration conditions for operation, as well as any other State or federal requirements (such as HSC section 41700).

1. District Responsibilities

In order for the ARB to effectively coordinate with 34 separate districts in implementing and enforcing the Statewide Registration Program, reliance on the use of the Internet would be encouraged. ARB would develop a database, accessible through the Internet, to record and obtain information on each engine or equipment unit registered under the Statewide Registration

Program. ARB would be responsible for maintaining and updating the database as changes occur. Districts would be responsible for keeping information current on the results of inspections, source testing, enforcement actions, and other information necessary to promote consistent and effective operation of the Program. Where a district does not have access to the Internet, district information may be submitted directly to the ARB in writing. ARB staff would enter information received in this manner into the electronic database.

a. Inspection

A district may inspect a registered portable engine or equipment unit at any time to ensure continued compliance with the Statewide Registration Program. Under the Statewide Registration Program each registered engine or equipment unit would be issued a separate identification number. The identification number is to be maintained on the registered engine or equipment unit at all times. Upon inspection, district staff can use the identification number to verify make, model, serial number, engine or equipment configuration, air pollution control equipment, visible emissions readings, and any other information necessary to determine compliance with the Statewide Registration Program.

Unlike many district permit programs, the owner and/or operator of a registered engine or equipment unit would not be required to carry a copy of the registration certificate with the registered unit. Instead, the registration identification number can be used, via the Internet, to access a copy of the registration certificate, operational conditions, and the compliance history of a specific registered engine or equipment unit. In some instances this approach may result in compliance being verified after the inspection when the district staff is able to access information at the office using the identification number obtained during the inspection. The effectiveness of this approach would rely heavily on districts using the Internet, not only to access information on registered engines and equipment units, but by inputting inspection results as well. In order to verify compliance with daily and annual emission limits, districts may request, at any time, copies of daily records maintained by owners and/or operators of registered engines or equipment units. Annual reports submitted to the ARB by March 1 of each year would be made available, via the Internet, to districts for compliance and/or emission inventory purposes.

b. Compliance Verification Testing

California Health and Safety Code section 41755 allows a district to conduct source testing of registered engines to determine compliance with mass emission limits where there is an indication of noncompliance, evidence of engine tampering, lack of proper engine maintenance, or other problems or operating conditions that could affect engine emissions. Source testing of engine emissions for compliance purposes cannot be required where there is no applicable emission limit. Upon requiring a source test or obtaining the results, the district is expected to record such information on the Internet, for monitoring and use by ARB and other districts.

c. Violations

Upon determining a violation of the Statewide Registration Program, districts would handle the violation in the same manner as a violation of the district rules and regulations. The owner and/or operator of a registered engine or equipment unit found to be in violation may appeal the violation through the procedures or processes established by the district. In the event that a district, because of repeated violations, determines that registration for an engine or equipment unit should be suspended or revoked, petition must be made to the Executive Officer of the ARB. In reviewing the evidence, if the Executive Officer determines that the request for suspension or revocation is justified, the procedures established in the Statewide Registration Program for suspension or revocation as discussed below would be adhered to. Under no circumstances may a district or representative of the district grant a variance or waiver from any requirement of the Statewide Registration Program. The Statewide Registration Program requires that districts provide the Executive Officer with written reports or electronic submittal via the Internet, describing any inspection and the nature and outcome of any violation by the owner and/or operator of a registered engine or equipment unit.

2. ARB Responsibilities

a. Source Testing for Eligibility Verification

The ARB would evaluate applications for compliance with the proposed Regulation. The Executive Officer may require inspection and/or source testing to determine engine or equipment unit registration eligibility if no appropriate manufacturer's or source test emissions data (where required) is available. In addition, the Executive Officer may require inspection and/or source testing where ARB staff does not believe the engine or equipment unit is capable of meeting the requirements of the proposed Regulation. Source testing would not be required if appropriate source test or manufacturer's emissions data from testing was performed in the last three years is available. Source testing would not be required for engines or equipment units that are not required to meet specific emission limitations. Because TSE is subject only to opacity limits, source testing for eligibility verification is not required.

b. Revocation and Suspension

Based on information provided by districts or obtained during ARB inspection, the Executive Officer of the ARB may decide to suspend or revoke registration in the Statewide Registration Program. If a registered engine or equipment unit is in violation of the terms of the regulation, the Executive Officer would notify the owner to correct the problem. If the violation is corrected, in most cases suspension or revocation would not be necessary. The Executive Officer may suspend or revoke registration in any of the following circumstances:

- The holder of the registration has violated one or more terms and conditions of registration or has refused to comply with any of the requirements of the proposed Regulation;

- The holder of the registration has materially misrepresented the meaning, findings, effect or any other material aspect of the registration application, including submitting false or incomplete information in its application for registration regardless of the holder's personal knowledge of the falsity or incompleteness of the information;
- The test data submitted by the holder of the registration to show compliance with this regulation have been found to be inaccurate or invalid;
- Enforcement officers of the ARB or the Districts have been denied access, during normal business hours or hours of operation, to any facility or location where registered portable engines and equipment units are operated or stored and are prevented from inspecting such engines or equipment units as provided for in the proposed Regulation (the duty to provide access applies whether or not the holder of registration owns or controls the facility or location in question);
- Enforcement officers of the ARB or the Districts, after presentation of proper credentials, have been denied access to any records required by the proposed Regulation for the purpose of inspection and duplication;
- The registered portable engine or equipment unit has failed, in-use, to comply with the findings set forth in the registration. Noncompliance with the registration may include, but is not limited to:
 - a repeated failure to perform to the standards set forth in the proposed Regulation; or
 - modification of the engine or equipment unit that results in an increase in emissions or changes the efficiency or operating conditions of such engine or equipment unit, without prior notice to and approval by the Executive Officer; or
- The holder of the registration has failed to take requested corrective action as set forth in a Notice of Violation or Notice to Comply within the time period set forth in such notice.

Violations of any of the requirements of the proposed Regulation, may result in a revocation or suspension of the registration. In addition, violations of the regulation can result in nuisance, civil, and/or criminal violations which may result in imprisonment and/or fines as specified by Article 3, section 42400 et seq., Article 3.5, section 42420 et seq., and Article 4, section 42450 et seq. and referenced sections of the HSC.

A new application must be submitted to register an engine or equipment unit that has

previously been suspended or revoked. In addition, proof that all circumstances that contributed to revocation or suspension have been corrected must be included with the application.

c. Appeals

If engine or equipment unit registration has been suspended, revoked, or denied, the owner has the right to request a hearing to review the decision. To request a hearing, the owner must submit the following information, in writing, to the Executive Officer within 20 days of suspension, denial, or revocation:

- name of applicant or registration holder;
- registration number;
- copy of Executive Order revoking or suspending registration or a written notification of denial;
- a concise statement of the issues to be raised, with supporting facts, setting forth the basis for challenging the denial, suspension, or revocation (mere conclusory allegations would not suffice);
- a brief summary of evidence in support of the statement required; and
- the signature of the authorized person requesting the hearing.

Enforcement actions taken by a district can not be appealed to the ARB. Appeal of these actions shall be handled through processes or procedures established by the district.

d. Penalties

Violations of the HSC provisions, including the proposed Regulation, may result in penalties such as fines or imprisonment as specified in by Article 3 and referenced sections of the HSC.

IV.

PROGRAM JUSTIFICATION

A. INTRODUCTION

This chapter discusses how the provisions of the proposed Regulation were drafted to comply with the requirements found in the mandating legislation, and other applicable State and federal laws.

1. Authority to Create Statewide Registration Program Regulation

The current structure of local, State, and federal regulations pertaining to portable engines and equipment units is a convoluted array of varying requirements. For the purposes of the proposed Regulation, requirements for portable engines and equipment units are kept separate. Federal law prohibits the ARB from exempting equipment units from federal stationary source program requirements. As a result, the requirements for equipment units established in the proposed Regulation would ensure that equipment units registered in the Statewide Registration Program are not subject to federal requirements. With regards to portable engines, the U.S. EPA has provided some flexibility in establishing requirements. In a letter (copy included in Appendix E of this report) dated June 26, 1996, to Mr. James Boyd, Executive Officer, ARB, the U.S. EPA provided the State the flexibility to treat portable engines as stationary or mobile sources.

Prior to 1988, exclusive authority for the regulation of off-road equipment rested with the 34 local air pollution control and air quality management districts. California Health and Safety Code sections 39002 and 40000 provide that districts have primary responsibility for control of air pollution from all sources other than emissions from motor vehicles. With the California Clean Air Act of 1988, the Legislature granted the ARB authority to adopt standards and regulations for off-road vehicles and equipment. The granting of authority, however, did not expressly preempt districts of the authority to regulate and permit non-vehicular off-road equipment. The ARB and districts have interpreted the HSC to provide for concurrent jurisdiction over such equipment.

The federal Clean Air Act Amendments of 1990 gave the U.S. EPA authority over the regulation of new nonroad (off-road) engines. The amendments created federal preemptions that, in general, prohibited states (including districts) from adopting emissions standards or other requirements for new nonroad engines. Recognizing the unique air pollution problems confronting California, Congress provided special authority for the U.S. EPA to grant California the authority to adopt standards and regulations for all nonroad engines, except nonroad engines under 175 bhp used in construction industries.

Originally, the federal regulations interpreting the CAA defined nonroad engines as engines manufactured after July 18, 1994. However, after being challenged by affected industry,

U.S. EPA requested that part of the federal regulation be remanded back by the U.S. EPA for further consideration. The U.S. EPA has yet to establish a new date. For the purposes of the proposed Regulation, ARB staff has considered nonroad engines to be an engine manufactured after November 15, 1990. November 15, 1990 is the date the CAA amendments became effective, which gave the U.S. EPA authority over nonroad engines.

As nonroad engines, the CAA preemptions arguably circumscribe the authority the districts have to regulate such engines. However, under the federal regulation districts may continue to permit and establish operational controls (daily or hourly emission limits, fuel restrictions, etc.) for nonroad engines. The State, upon receiving authorization from U.S. EPA, may require nonroad engines (except nonroad engines under 175 bhp used in construction) to incorporate control technologies, meet emission limitations, or otherwise be regulated. Table IV-1 presents the current regulatory authority for engines and equipment units eligible to register in the statewide program.

Beginning on January 1, 1996, ARB and the U.S. EPA require that newly-manufactured engines be certified to meet specific emission limitations. The emission requirements for the certified engines are to be phased-in from 1996 to 2000, based on horsepower rating (see Table III-4).

2. Authority to Regulate Portable Engines and Equipment Units

Sections 41750-41755 of the HSC require the ARB to adopt a regulation that creates a voluntary, uniform Statewide Registration Program for owners and/or operators of portable engines. AB 2635 amended sections 41750-41755 of the HSC by requiring the Statewide Registration Program to include specific portable equipment units that operate in association with registered portable engines. In addition, SB 1880 further clarifies the definition of “portable” in section 41750 of the HSC to make it consistent with federal law.

The Statewide Registration Program was developed to preserve specified requirements and emissions benefits of district programs, comply with State and federal regulations, and adhere to legislative mandates. The proposed Regulation preserves the current, most-stringent district control requirements pertaining to equipment units. Engine requirements vary depending on bhp rating, year of manufacture, use, operating history in the State, and year of registration.

Table IV-1 Current Regulatory Authority for Portable Engines and Equipment Units

	Non-Engine Equipment (Equipment Units)	Engines		
		Manufactured Before 11/15/90	Manufactured after 11/15/90	
			Construction < 175 bhp	Non- road Engines
Require Permits	district ¹	district ¹	district ¹	district ¹
Authority to set mass concentration limits (e.g., ppm)	district ¹	district ¹	U.S. EPA	ARB ²
Authority to Require control equipment	district ¹	district ¹	U.S. EPA	ARB ²
Authority to set daily and annual emission limitations (e.g., pounds/day, tons/year)	district ¹	district ¹	ARB/district ¹	ARB/district ¹

1. Where districts previously had authority, State law preempts that authority for engines or equipment units registered with the State.
2. Requires prior approval from U.S. EPA.

B. LEGISLATIVE MANDATES FOR STATEWIDE REGISTRATION PROGRAM

1. Assembly Bill 531 (Morrissey, 1995, signed by Governor October 12, 1995)

Assembly Bill 531 is included in Appendix B. Sections 41750-41755 of the HSC (AB 531) requires the ARB to do the following:

- establish an optional registration program, by regulation, for portable internal combustion engines, as defined;
- assess fees for the registration and the renewal of the registration of those engines;

- establish emission limits and emission control requirements for those engines after conducting an evaluation, holding public hearings, and considering prescribed factors;
- evaluate the emissions from the operation of portable internal combustion engines and identify emission reduction technologies that may be applied to those engines;
- provide for the voluntary registration of each portable internal combustion engine, and provide for the renewal of registration not more than once every three years;
- include a uniform statewide district fee schedule for recovery of the reasonable costs of enforcing the Statewide Registration Program;
- require the registration program to take effect on the date specified by the State Board in the regulation, but not later than 180 days from the date the State Board adopts the regulation;
- periodically revise and update the regulations adopted pursuant to section 41755 of the HSC, including, but not limited to, revising and updating a determination of Best Available Control Technology (BACT) for portable internal combustion engines;
- assure emissions from portable internal combustion engines do not, in any manner, cause a violation of State or federal ambient air quality standards; (see changes required by AB 2635)
- preserve the most stringent requirements adopted by a district which require the use of BACT for each class or category of portable internal combustion engines which were in effect on January 1, 1995;
- assure the Statewide Registration Program is consistent with the State Implementation Plan, and any amendments to that plan, required to be submitted pursuant to the CAA; (see changes required by AB 2635)
- assure that any registered portable internal combustion engine, including any turbine, used by the Department of Defense or the National Guard exclusively for military tactical support or other federal emergency purposes, as specified in the State Board's regulation, is not subject to any statewide or district emission control or emission limit;
- assure that no emission limit or emission control requirement is established for any engine or class of engines unless the State Board determines that the emission limit or emission control requirement is technologically and economically feasible for those engines or that class of engines;
- consider the magnitude of the resultant air quality benefits and the potential effects of the regulation on the costs to businesses that use the engines;
- establish for any engine or class of engines emission limits that reflect the effectiveness of all control equipment installed and operated on the engine or particular class of engine; and
- adopt a regulation no later than January 1, 1997 (see changes required by AB 2635).

Subsequent 1996 legislation, AB 2635 and SB 1880, were sponsored by industry

representatives to expand the registration program to include associated equipment and provide clarification for specific requirements of AB 531.

2. Assembly Bill 2635 (Morrissey, 1996, signed by Governor September 11, 1996)

Assembly Bill 2635 is included in Appendix C. Assembly Bill 2635 further refines the requirements of sections 41750-41755 of the HSC by incorporating the following requirements:

- revise that program and those specified regulatory provisions to apply to portable equipment;
- require any recordkeeping and reporting requirements prescribed by the State Board for the purpose of tracking engine utilization and movement to be the minimum that is necessary to provide sufficient emission inventory data and allow adequate enforcement of the registration program;
- require the State Board, in consultation with affected districts, to amend the State Implementation Plan to include the Statewide Registration Program and conform the State Implementation Plan to its requirements;
- prohibit source testing of engine emissions under prescribed conditions;
- assure that emissions from portable equipment subject to the Statewide Registration Program would not, in the aggregate, interfere with the attainment or maintenance of State or federal ambient air quality standards and the emissions from any one portable equipment engine, exclusive of background concentration, shall not cause an exceedance of any ambient air quality standard;
- assure that source testing of portable equipment emissions for registration purposes is not required if there is no emission standard applicable to portable equipment, or if acceptable emissions data is available;
- assure that source testing of engines for compliance purposes is not required more frequently than once every three years, except where evidence of engine tampering, lack of proper engine maintenance, or other problems or operating conditions that could affect emissions from the engine are identified; and
- adopt regulation no later than June 1, 1997.

3. Senate Bill 1880 (Lewis, 1996, signed by Governor September 27, 1996)

Senate Bill 1880 is included in Appendix D. Senate Bill 1880 does not contain any provisions for requirements beyond those found in sections 41750-41755 of the HSC. Senate Bill 1880 simply refines the definition of “portable” to make it consistent with CFR 40 Part 89, section 209(e) et seq. SB 1880 and AB 2635 address the same section of the HSC pertaining to the definition of portable. The amendments of SB 1880 take precedence over those of AB 2635 because SB 1880 was chaptered by the Secretary of State after AB 2635.

C. INVESTIGATIONS REQUIRED BY LEGISLATION

The following section addresses requirements set forth in State law for developing the Statewide Registration Program.

1. State Implementation Plan

To attain and subsequently maintain the National Ambient Air Quality Standards (NAAQS) for various criteria pollutants, each state is required to adopt and submit to the U.S. EPA a plan providing for the eventual attainment and continued maintenance of the standards. Each of these plans includes for each pollutant a detailed emission inventory, a summary of the control strategies propose to achieve the NAAQS in the required time, and a summary of the State's legal authority to administer and enforce the plan.

Some districts have identified emission reduction strategies for portable engines and equipment units covered by the proposed Regulation in the State Implementation Plan (SIP). Section 41753 of the HSC requires that the ARB, in consultation with affected districts, amend the SIP as necessary to include the Statewide Registration Program and conform the SIP to its requirements. On the State level, the Statewide Registration Program is expected to cause an overall reduction of emissions from portable engines. On the district level, emission reductions only in the SCAQMD may be compromised in the short-term by the Statewide Registration Program. A discussion of the emissions impact of the Statewide Registration Program on the State as a whole as well as on the individual districts of concern is included in Chapter VI, section B.2.

The ARB staff believes that the Statewide Registration Program would not significantly impact the SIP. In order to meet the expected reductions, portable engines registered in the Statewide Registration Program must meet the federal and State standards established for newly manufactured engines. To meet these goals, the regulation contains a phase-in schedule for existing engines to meet the federal and State standards. The phase-in dates and requirements are specifically spelled out in Chapter III, section C.1.h.

a. SCAQMD Rule 1110.2

SCAQMD Rule 1110.2 (adopted August 3, 1990) reduces the emissions of nitrogen oxides (NO_x), volatile organic compounds (VOC), carbon monoxide (CO) and particle matter (PM) from stationary and portable engines. The rule requires that all portable engines rated greater than 100 brake horsepower (bhp) meet a grams NO_x/bhp-hour (g NO_x/bhp-hr) standard or be replaced by electric motors by December 31, 1999.

b. Ventura County Rule 74.16

Portable engines operating in Ventura County Air Pollution Control District (VCAPCD) that are associated with oil field drilling are subject to VCAPCD Rule 74.16, Oil Field Drilling Operations (adopted January 8, 1991). This rule requires that oil field drilling operations be powered by electrical grid power. Where it can be shown that electrical grid power is not economically or technologically feasible, engines can be used, but must meet an emission standard of 6.9 g/bhp-hr.

The ARB anticipates that there may be a small short-term increase in emissions from drilling operations due to the timing of control requirements established in Ventura's rule and the proposed Regulation. However, staff expects that overall the proposed Regulation would result in emission reductions because the emission controls, emission limits and gradual phase-in of cleaner technology are required for all portable engines registered and operating in Ventura County.

2. Ambient Standards

Section 41754 of the HSC requires that emissions from portable engines and equipment units subject to the Statewide Registration Program do not, in the aggregate, interfere with the attainment or maintenance of State or federal ambient air quality standards, and the emissions from any one portable engine exclusive of background concentration shall not cause an exceedance of any ambient air quality standard. The following discussion supports ARB staff's assessment that emissions from engines and equipment units registered under the proposed Regulation would not have a significant impact on air quality and in the long-term would ensure overall emission reductions above existing programs.

a. Attainment of Standard

As discussed earlier in this report, the aggregate emissions from engines and equipment units registered under the Statewide Registration Program are not expected to interfere with the attainment or maintenance of State or federal ambient air quality standards. Upon implementation of the Statewide Registration Program, the total number of engines and equipment units is not expected to significantly increase. The Statewide Registration Program merely provides owners and/or operators of portable engines and equipment units an alternative to permitting or registering at the district level. It does not create a program that promotes the growth of the industry. In addition, the requirements in the proposed Regulation establishing emission limits, control technologies, fuel restrictions, and the ultimate phase-in of cleaner technologies would ensure that emissions from registered engines and equipment units would be minimized.

b. Modeling

The staff analyzed emission impacts from portable engines of various horsepower ratings eligible for registration under the proposed Regulation. Emissions of NO_x, CO and PM₁₀ were modeled. Disregarding ambient background concentrations, the modeling results indicate that maximum downwind emission concentrations from any single engine would not exceed State or federal ambient air quality standards. Refer to Appendix F, Memorandum on Modeling Results for Portable Engines.

3. Control Technology Requirements

Section 41754 of the HSC requires ARB to preserve the most stringent district BACT requirements for portable engines and equipment units that were in effect on January 1, 1995. In addition, to the extent not in conflict with federal law, the ARB must consider technical and economic feasibility in establishing emission limits or control equipment requirements for resident portable engines.

For engines defined as resident in the proposed Regulation, the control requirements are equivalent to RACT/BARCT, which consider technical and economic feasibility. Portable engines not qualifying under the resident provisions are required to meet BACT or California or federal standards established pursuant to Title 13 of the California Code of Regulations or CFR 40 Part 89. Equipment units registered under the proposed Regulation have no other option but to meet BACT requirements. This approach is consistent with district and federal programs, and meets with the intent of State law.

BACT was determined through reviewing the SCAQMD BACT Guidelines, San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD), BACT Clearinghouse, CAPCOA Model Portable Equipment Registration Rule, and the CAPCOA BACT Clearinghouse. In addition, ARB staff polled district permitting staff to determine applicable BACT requirements for portable engines. Based on this review, ARB staff identified the most stringent BACT requirements that were in effect on January 1, 1995. For the proposed Regulation, BACT was established for compression-ignition engines, spark-ignition engines and dredges. Similarly, RACT/BARCT was determined through a review of district prohibitory rules applicable to portable engines and a polling of district permitting staff. RACT/BARCT is established in the proposed Regulation for compression-ignition and spark-ignition engines. The specific BACT and RACT/BARCT requirements are listed in Tables III-2 and III-3.

The technology requirements for equipment units contained in the proposed Regulation were taken directly from the CAPCOA Model Portable Equipment Registration Rule. The CAPCOA Model Rule was approved by the CAPCOA Board of Directors on April 28, 1994, and at that time established BACT requirements for portable equipment units. ARB staff believe that the requirements in the CAPCOA Model Rule reflect district BACT requirements in effect on January 1, 1995. Further, ARB staff believe that BACT and RACT/BARCT are equivalent for equipment units eligible to register under the Statewide Registration Program. For this reason, only one set of control requirements has been established for each category of equipment unit

identified in the proposed Regulation.

The following discussion describes the various technology options listed in the proposed Regulation.

a. Compression-ignition Engines

From inventory reports and discussions with industry representatives, compression-ignition engines are estimated to comprise at least 95 percent of portable engines to be registered under the Statewide Registration Program. Emissions of NO_x are of primary concern from the operation of compression-ignition engines. The control technologies discussed and considered are injection timing retard, turbocharging, aftercooling, and selective catalytic reduction. Some retrofit technologies are not technologically feasible for specific engine applications because of on-road weight limits, space, configuration, operational, or technological limitations. The regulation is flexible in allowing engine owners to choose from a number of control technologies. This flexibility enables owners and/or operators to select the most effective method for satisfying the requirements established in the proposed Regulation.

i. Injection Timing Retard

Injection timing retard (retard) is an engine retrofit technology that is found to effectively reduce emissions of nitrogen oxides by approximately 20-30 percent for many compression-ignition engines. The regulation specifies 4-degree injection timing retard as a requirement for registration. Injection timing retard is not required if it can be demonstrated to the Executive Officer to be technologically infeasible. To properly demonstrate that retard is infeasible, the engine owner must provide appropriate documentation (including a cost effectiveness study or an engineering analysis showing a high probability of engine damage occurring). Exemptions to the 4-degree retard requirement would be granted on a case-by-case basis for specific engine classes of the same make, model, model year, and configuration. The Executive Officer may require a lesser degree of injection retard (3-, 2-, or 1-degree retard) if determined appropriate.

ii. Turbocharger, Aftercooler/ Intercooler

A turbocharger uses energy from the exhaust stream to drive a compressor and increase the intake air pressure. Therefore, a larger mass of air and fuel can be injected into the cylinder resulting in a higher power output, as well as higher NO_x production rates. Because the turbocharger increases the temperature of the air it compresses, a heat exchanger, known as an aftercooler or intercooler, is usually used after the turbocharger in stationary applications. This lowers the temperature of the gases, increases the density of the charge and controls pre-ignition. Generally, the output-specific NO_x emissions are lowered because the effect of the efficiency increase is greater than the effect of the NO_x production rate increase. This technique can get an average 25 percent reduction in NO_x emissions with an average 5 percent decrease in fuel consumption compared to naturally aspirated engines. Many portable engines are fitted with

turbochargers and aftercoolers when manufactured. In addition, many owners of engines choose to install turbochargers and aftercoolers because of the increased power and decreased fuel consumption. Many of the engines eligible to register in the Statewide Registration Program already employ the use of turbochargers and aftercoolers. Because of the power and fuel consumption benefits associated with turbocharging and aftercooling, retrofitting with this technology is a viable and attractive option in many instances. Turbocharging and/or aftercooling is one of three choices of emission control requirements for resident engines. For non-resident engines, injection timing retard, in addition to turbocharging and/or aftercooling or specific NO_x emission limits, are required.

iii. Selective Catalytic Reduction

Historically, districts have required more stringent emission control requirements as BACT for operations such as dredging. Dredging operations are energy intensive processes utilizing multiple large engines. In order to minimize the emission impacts of these operations, many districts have required Selective Catalytic Reduction (SCR) on engines used for dredging. SCR has only been shown to be effective for engines that operate at fairly constant loads over the course of the day. Engines used in operations where loading is not relatively constant do not maintain the exhaust temperature window necessary for SCR to operate properly. In addition, because of the harsh operating environments typical with most drilling operations, SCR has not been proven to be a technological feasible option. Only hydraulic dredge engines were found to maintain constant rpm. As a result, the proposed Regulation requires only dredge engines that operate on a continuous basis, rather than intermittently, on any given day (i.e., hydraulic dredges) to install SCR or other equivalent control technology.

b. Spark-ignition Engines

The sole control technology considered for spark-ignited engines is a catalyst. Catalysts have been shown to be a technologically and economically feasible emission control technology for reducing emissions from spark-ignited engines. In district BACT determinations spark-ignited engines are required to either incorporate a catalyst, or meet specific pollutant concentration levels. Non resident spark-ignited engines must meet more stringent pollutant concentration levels which can only likely be achieved by incorporating a 3-way catalyst. See Table III-3.

Three-way catalysts reduce emissions of NO_x, VOC, and CO. A three-way catalyst promotes the chemical reduction of NO_x by carbon monoxide and hydrocarbons to produce carbon dioxide, water vapor and nitrogen. The three-way catalyst also controls hydrocarbons and carbon monoxide through oxidation. Removal efficiencies for three-way catalysts are typically above 90 percent for NO_x, above 80 percent for CO, and above 50 percent for VOC.

c. Equipment Units

Emission control requirements for equipment units associated with engines reflect typical

control technologies that have been shown to be technologically and economically feasible and effective in practice. PM_{10} is the major pollutant of concern from portable equipment units. Consequently, specific control requirements pertaining to equipment units include fabric or cartridge type vent filters and dust collectors, and/or wet suppression systems. These types of particulate emission control devices are commonly required for portable equipment units as part of district BACT determinations. As opposed to portable engine emission control requirements, there is no distinction between requirements for resident or non-resident equipment units, and there are no options of emission concentrations or choice of control technologies. Control requirements are the same for all registered portable equipment units.

D. OTHER REQUIREMENTS

This section discusses State and federal requirements which cannot be preempted through registration under the Statewide Registration Program.

1. Federal Requirements

The enactment of the federal Clean Air Act of 1970 resulted in three major regulatory programs affecting stationary sources: State Implementation Plan (SIP), New Source Performance Standards (NSPS), and National Emission Standards for Hazardous Air Pollutants (NESHAPs). Major amendments were added to the CAA in 1977 and in 1990. The 1977 amendments established the Prevention of Significant Deterioration (PSD) program in areas attaining the National Ambient Air Quality Standards (NAAQS). The 1990 Amendments substantially increased the authority and responsibility of the federal government. Considerations of SIP requirements are previously discussed in section C.1. of this chapter, a discussion of NSPS, NESHAP, and PSD follows.

a. New Source Performance Standards (NSPS)

Federal New Source Performance Standards specify emission limits for various categories of large new or modified sources of pollutants. These emissions limits can be achieved by applying Best Demonstrated Technology (BDT). BDT is defined as the best technological system for continuously-reducing emissions for a specific source category, taking into account costs, non-air quality health and environmental impacts, and energy requirements of this technology. Where emissions limits are not practical or enforceable, the regulations may prescribe design, equipment, work practice, or operational standards. To date, U.S. EPA has published standards for more than 60 source categories. U.S. EPA has direct authority to enforce NSPS regulations as well as authority to delegate enforcement to states and districts. Many states and a number of districts have adopted NSPS standards and have received delegation for enforcing the standards from the U.S. EPA for sources within their jurisdiction.

Because this is a federal program and states cannot preempt federal authority, portable engines and equipment units, subject to an applicable NSPS are not eligible for registration under the Statewide Registration Program.

b. National Emissions Standards for Hazardous Air Pollutants (NESHAPs)

In 1970, the National Emission Standards for Hazardous Air Pollutants program was established to require the U.S. EPA to set emissions standards for a number of Hazardous Air Pollutants (HAPs). This program underwent sweeping changes in the 1990 CAA amendments. By law, 189 substances are now listed as HAPs. For purposes of controlling these substances, U.S. EPA must identify all of the source categories by type of industry or process (e.g., chemical plants, oil refineries, steel plants) that encompass major sources of emissions of these HAPs. Major sources are those emitting 10 tons per year or more of a single HAP or 25 tons per year or more of any combination of HAPs. Individual standards for specific source categories (e.g., halonated solvent cleaners) may regulate non major as well as major sources if combined non major emissions are significant. These standards are to be published on a schedule that would result in regulation of all source categories within 10 years. Whereas in the past, HAP emission standards were based on health risk assessments, the new standards are based on the best demonstrated emissions control practices. The CAA amendments refer to these as Maximum Achievable Control Technology (MACT) standards.

Again, because of possible preemption of federal regulations, portable engines or equipment units, subject to an applicable NESHAPs or MACT standard are not eligible for registration under the Statewide Registration Program.

c. Prevention of Significant Deterioration (PSD)

Prevention of Significant Deterioration is a program designed to minimize the air quality impact of new or modified major sources in attainment or unclassified areas. PSD permitting programs affect major sources with the potential to emit 100 to 250 tons per year or more of a criteria and/or certain non-criteria pollutants. Sources triggering PSD requirements must install federal BACT. In addition, an extensive environmental impact analysis must be performed.

Prior to operating within 15 kilometers from the outer boundary of a "Class I Area," as defined under Title I, Part C of the CAA, the owner and/or operator of a registered equipment unit must notify the U.S. EPA and obtain approval from U.S. EPA or a delegated district prior to commencing operation under the applicable provisions regarding PSD. This provision is included in the proposed Regulation to ensure that the operation of a registered equipment unit at a given location would not trigger PSD requirements without proper review and approval.

d. Title V

Title V of the CAA amendments of 1990 establishes an operating permits program for major and certain other stationary sources. Title V regulations require stationary sources to obtain operating permits that assure compliance with all applicable federal requirements. In California, the lowest major source threshold for triggering Title V requirements is 10 tons per year of VOC or NO_x in the South Coast Air Basin.

Because the purpose of the Statewide Registration Program is to allow portable engines and equipment units to move and operate freely throughout the State by establishing uniform standards, the 10 ton per year threshold is a requirement to qualify for registration. Any equipment unit registering under the Statewide Registration Program would be restricted to no more than 10 tons per year per district of any criteria pollutant. In addition, any equipment determined to be part of a stationary source and subject to Title V permit requirements would not be eligible for registration. This provision is intended to prevent possible conflicts with Title V requirements.

e. Federal and State Nonroad Regulations

Impacts of nonroad regulation requirements are previously discussed in section B.1 of this chapter.

f. New Source Review

The New Source Review program establishes regulations and requirements that govern the building or expansion of major stationary sources in nonattainment areas. New Source Review programs provide the regulatory mechanism to allow continued industrial growth while minimizing the amount of emission increases from this growth. The two major components of New Source Review (NSR) programs are the requirements for Best Available Control Technology (BACT) and offsets.

Under federal permitting programs, stationary sources with emissions in excess of 82 pounds per day of PM₁₀ could be subject to NSR or PSD requirements. Consequently, equipment units exceeding 82 pounds per day of PM₁₀ are not eligible for registration.

2. State Requirements

a. District Authority

California Health and Safety Code section 41700 provides that, “no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.” The Statewide Registration Program does not preempt HSC section 41700.

A district may, upon making a determination that the operation of a registered engine or equipment unit poses a threat to public health or welfare, take whatever steps are necessary to alleviate the threat permissible under State and district rules, regulations, policies, or procedures.

V.

ECONOMIC CONSIDERATION

A. INTRODUCTION

This chapter discusses the economic impacts of the proposed Regulation. The proposed regulation is expected to have an overall beneficial impact on affected business and industry.

B. ECONOMIC IMPACTS OF STATEWIDE REGISTRATION PROGRAM

1. Summary of Economic Impacts

Overall, most applicants seeking registration of their portable engines and equipment units are expected to benefit from the proposed Regulation. The Statewide Registration Program is expected to improve California business climate by eliminating the need for duplicative permits and by reducing the costs of operation for most businesses. As a result, ARB staff expects the Statewide Registration Program to have positive impacts on California employment, business status, and business competitiveness.

2. Legal Requirement

Section 11346.3 of the Government Code requires State agencies to assess the potential for adverse economic impacts on California business enterprises, individuals, and State agencies when proposing to adopt or amend any administrative regulation. The assessment shall include a consideration of the impact of the proposed Regulation on California jobs, business expansion, elimination, or creation, and the ability of California business to compete.

3. Businesses Affected

Any business which owns or operates portable internal combustion engines and equipment units can potentially be affected by the proposed Regulation. The affected businesses fall into different industry classifications. A list of the industries that we have been able to identify is provided in Table V-1.

Table V-1

Industries Affected by Statewide Registration Program	
<u>SIC Code</u>	<u>Industry</u>
1311	Crude petroleum and natural gas
1321	Natural gas liquids
1381	Drilling oil and gas wells
1382	Oil and gas exploration services
1389	Oil and gas field services, not elsewhere classified
1521	Single-family housing construction
1522	Residential construction, not elsewhere classified
1531	Operative builders
1541	Industrial buildings and warehouses
1542	Nonresidential construction, not elsewhere classified
1611	Highway and street construction
1622	Bridge, tunnel, and elevated highway
1623	Water, sewer, and utility lines
1629	Heavy construction, not elsewhere classified
1711	Plumbing, heating, air-conditioning
1771	Concrete work
1781	Water well drilling
1791	Structural steel erection
1794	Excavation work
1795	Wrecking and demolition work
4925	Gas production and/or distribution
4941	Water supply
4952	Sewerage systems
4953	Refuse systems
4959	Sanitary services, not elsewhere classified
4961	Steam and air-conditioning supply
4971	Irrigation systems
7349	Building maintenance services, not elsewhere classified
7353	Heavy construction engines and equipment units rental
7359	Equipment rental and leasing, not elsewhere classified
7519	Utility trailer rental
7812	Motion picture and video production
7819	Services allied to motion pictures
7996	Amusement parks
9711	National security

4. Analysis of Cost Impacts

Costs associated with the Statewide Registration Program can be divided into three major areas: registration and renewal fees, control technology costs, and source testing. Additional costs may occur, in the areas of recordkeeping, reporting, and notification. However, because these requirements are the minimum necessary to ensure that the Statewide Registration Program is enforceable, ARB staff believe the impact of such costs to businesses registered under the Statewide Registration Program would be negligible.

In analyzing the identified major cost areas, ARB staff has compared the relative costs of the Statewide Registration Program and district permitting or registration programs. The owner and/or operator of a portable engine or equipment unit has the option of registering with the State or complying with district requirements. Although the Statewide Registration Program may be mandatory for some portable engines in some districts, ARB staff believe that the mandatory requirement would apply to a small percentage of the overall universe of portable engines and therefore the impact of this mandatory requirement would be insignificant. This is because, although federal law preempts districts from regulating nonroad engines, ARB staff believes districts still maintain the ability to require permits and establish operational limits. District use of this permitting authority to establish operational limits can be a very effective means of minimizing emission impacts from nonroad engines.

a. Registration and Renewal Fees

Table V-2 compares the registration and renewal costs of the Statewide Registration Program against the six districts that have adopted portable equipment registration programs. In addition, Table V-3 provides a comparison of various district permitting costs for portable engines. Under district programs, the cost for initial registration ranges from \$150 to \$200 and permitting costs range from \$110 to over \$3,000. Initial registration under the Statewide Registration Program is \$90 per engine or equipment unit. The \$90 fee covers initial registration for the first three years. Renewal fees range from \$90 per year for registration to almost \$2000 per year for permits at the district level. After three years, the yearly renewal fee under the Statewide Registration Program is \$30. The owner and/or operator of portable equipment under district registration programs, in addition to registration and renewal fees, must pay a \$45 to \$75 fee to each district in which operation occurs each year to cover administrative costs of the program. In addition, each district can charge a yearly inspection fee of \$45 to \$75. The Statewide Registration Program allows each district to collect \$75 per year for each registered engine or equipment unit inspected. For comparison purposes, the total registration/permitting and renewal costs for a five year period would be \$150 for the Statewide Registration Program, \$510 to \$800 for district registration programs, and \$350 to over \$10,000 for district permitting programs. Inspection fees are not included in these estimates because they are similar under State and district programs. In addition, the costs presented above represent permitting or registration costs for each district. Fees for the Statewide Registration Program represent total costs statewide.

Table V-2 A Comparison of Costs for Registering Portable Engines and Equipment Units in District Registration Programs Versus Statewide Registration Program

Registration Authority (District/ State)	Initial Registration Fee	Annual Renewal Fee	Administrative Fee for Equipment from out of district	Inspection Fee for Equipment from out of district	Annual Non-operational Fee
Northern Sierra	\$ 200.00	\$ 150.00	\$ 75.00	Included	\$ 35.00
San Diego	\$ 200.00	\$ 150.00	\$ 75.00	Included	\$ 35.00
San Joaquin	\$ 150.00	\$ 90.00	\$ 45.00	\$ 45.00	\$ 10.00
San Luis Obispo	\$ 150.00	\$ 90.00	\$ 45.00	\$ 45.00	\$ 10.00
South Coast	\$ 202.40	\$ 151.80	\$ 75.90	\$ 75.90	\$ 35.40
Yolo-Solano	\$ 200.00	\$ 150.00	None	\$ 75.00	\$ 25.00
Statewide Registration Program	\$ 90¹	\$ 30.00²	None	\$ 75.00³	\$ 10.00⁴

1. First 3 years are covered by initial registration fee.
2. Reflects a \$90 renewal fee for 3 years. (paid in lump sum)
3. Fee is per district per year if an inspection is performed. A given district may inspect more than once a year, but may not charge fee more than annually. (recognizing that each district in which engines and equipment units operates in a given year may charge the \$75 inspection fee.)
4. The annual fee reflects non-operational status without initial evaluation and is comparable to district programs and associated fees.

**Table V-3 A Comparison of Cost to Permit Portable Engines
in Districts That Do Not Have a Registration Program**

District	Horse-power Rating	Permit Fee	Yearly Renewal Fee
Glenn County	All	\$ 110	\$ 60 + \$ 4/ton ¹
Mojave	100 - 200	\$ 175 + YRF ²	\$ 3.60 per bhp
	200 - 1,000	\$ 175 + YRF ²	\$320 + \$17.10 per 10 bhp
	1000 +	\$ 175 + YRF ²	\$1,233 + \$8.55 per 10 bhp
Monterey Bay	All	\$360- \$440	\$88- \$363
Sacramento ³	>50 bhp	\$ 220	\$ 110
	50-249	\$ 440	\$ 220
	250-499	\$ 880	\$ 440
	499-999	\$ 1,760	\$ 880
	>1,000	\$ 3520	\$ 1,760
Ventura	All	\$ 400 + Equip. Fee ⁴	\$ 250 ⁵

1. Emission fees are based on \$4 per ton of each criteria pollutant emitted.
2. Yearly Renewal Fee.
3. Equipment associated with portable engines are permitted separately based on type, size, and use of the engines and equipment units.
4. Equipment fee varies and is based on hours spent by permit processor. A \$400 fee per permit is standard, each permit may have multiple units.
5. Annual fees are based on permitted emissions.

b. Control Technology Costs

The technology requirements contained in the proposed Regulation are consistent with district BACT, RACT and BARCT requirements for portable engines and equipment units. Because the Statewide Registration Program is voluntary, in most cases, the owner and/or operator of portable engines and equipment units would have the option of determining whether to register with the State or obtain permits or registration from local districts. In some instances, it may make better economic sense to retain local permits. Such may be the case when equipment is operated in attainment areas of the northern part of the State or when equipment is not frequently moved to multiple districts. Some districts in the State have minimal, if any, control requirements or emission limits for portable engines and equipment units. Other districts have

established very stringent requirements for portable engines and equipment units. This section would not attempt to contrast the technology costs of the Statewide Registration Program to those in districts with little or no requirements. Nor would it attempt to compare the costs of the Statewide Registration Program to the costs in districts with very stringent requirements, such as electrification of some portable engines in the South Coast Air Quality Management District or Ventura County Air Pollution Control District. For the purposes of this report it is assumed that on balance the technology requirements in the proposed Regulation are consistent with district permitting and registration requirements. Further, the requirements in the proposed Regulation reflect the specific mandates of HSC sections 41750 through 41755.

The costs of retrofitting an existing engine with the various technologies required in the Statewide Registration Program are summarized in Table V-4. For a resident engine the minimum requirement is injection timing retard, ARB staff estimates that on average such technology costs \$300 per engine. In some instances this requirement may be waived if it can be shown that injection timing retard is not technologically feasible. For non-resident engines, technology costs can be much higher. Retrofit costs can range from \$2,500 to over \$10,000 depending on the design and configuration of the engine. The possibility also exists that some engines, particularly those required to meet an emission standard equivalent to that established for new engines (Title 13 of the California Code of Regulations or CFR 40 Part 89), may not, because of technological infeasibility, be capable of being retrofitted to meet the requirements of the proposed Regulation. In this instance, the only option would be to purchase a new engine in order to remain registered under the Statewide Registration Program. ARB staff believe this would be a rare occurrence especially in light of the fact that the more stringent requirements of the proposed Regulation do not start to take effect until July 1, 2001. ARB staff would continue to monitor the evolution of new promising technologies to ensure that the Statewide Registration Program is a viable option to district programs and the program does not have a detrimental effect on the ability of businesses to competitively operate in the State.

The most expensive of the control requirements is the requirement for SCR on dredges. Dredges that operate on a continuous basis are required to install SCR or meet an equivalent emission limit. The cost of SCR is approximately \$125 per horsepower installed. A dredge running on 1,000 bhp would have SCR installed at a total cost of over \$100,000. Since SCR was determined to be district BACT, costs of this technology were not considered in establishing this technology as a requirement of the proposed Regulation.

**Table V-4
Estimated Costs of Retrofitting Engines***

Requirement	Cost
Injection timing retard	\$300
Throttle delay mechanism	\$400
Electronic controls	\$4,000
Turbocharger and associated engines and equipment units	\$2,400 - 9,000
Hour meters	\$120 - 200
Fuel meters	\$1,300
Precombustion retrofit	\$300
Selective Catalytic Reduction	\$125 per horsepower

*Based on information provided by Workgroup members.

c. Source Testing Costs

Source testing is a requirement of both the Statewide Registration Program and district permitting and registration programs. The costs for performing source tests and having the results analyzed are the same, regardless of the authorizing program. Costs for testing and analysis typically start at a few thousand dollars and go up depending on such factors as pollutants tested, number of tests, and complexity and location of operation. Testing under district permitting and registration programs can be required as frequently as a district determines necessary to ensure compliance. It is not uncommon to require annual testing of some engines. California Health and Safety Code section 41755 prohibits testing under the Statewide Registration Program more often than once every three years. Only in the event where evidence exists of engine tampering, lack of proper engine maintenance, or other problems or operating conditions that could affect emissions, can source testing be required more frequently. As a result, it is expected that source testing would be required less frequently under the Statewide Registration Program as compared to district programs.

5. Potential Business Impacts

Most businesses seeking registration of portable engines and equipment units would potentially benefit from the proposed Regulation. The program is intended to streamline the permitting process by eliminating the need for multiple permits at the district level. However, the program does not require or mandate that most owners and/or operators of portable engines or

equipment units participate. All businesses renting, operating or intending to operate internal combustion engines or equipment units can meet the registration requirements. Engines or equipment units not registered under the Statewide Registration Program are subject to any district registration, permitting, or other requirements. Since registration is voluntary for most engines and equipment units, most businesses would only participate in the Statewide Registration Program if it is financially advantageous and administratively convenient. Where registration is mandatory (see discussion in Chapter III) the cost of State registration is expected to be the same or lower than the cost of previous district permitting or registration programs.

6. Potential Impact on Business Competitiveness

The proposed Regulation is expected to have a beneficial impact on California business. This proposed Regulation is expected to eliminate duplicative testing to verify the performance of the engines and equipment units, conflicting requirements, and duplicative permits at each district. This would result in both time efficiency and cost savings. Since most individual businesses are not required to participate in the Statewide Registration Program, most businesses would not register engines or equipment units unless it determines that registration would be beneficial as opposed to obtaining permits or registration at the district level.

7. Potential Impact on Employment

The proposed Statewide Registration Program is not expected to cause a noticeable change in California employment. The Statewide Registration Program may actually improve the prospect for California employment because it improves business climate by eliminating the need for duplicative permits and reduces the costs of air quality permits in California.

8. Potential Impact on Business Creation, Elimination, or Expansion

No significant change is expected to occur in the status of the California business climate as a result of the proposed Regulation. The Statewide Registration Program may benefit California businesses due to streamlining the permitting process and potential decrease in permit fees.

9. Potential Impact on State Agencies

The proposed Regulation is not expected to have any impacts on any State agency. State agencies that have portable engines and portable equipment units that are currently under district permit or registration may benefit from registering under the Statewide Registration Program because of the reduced fees and uniform requirements.

VI.

AIR QUALITY CONSIDERATION

A. INTRODUCTION

This chapter discusses the air quality impacts of the proposed Regulation. ARB staff expect the proposed Regulation to result in long-term reductions in the statewide emissions of criteria pollutants from portable engines and equipment units.

B. AIR QUALITY IMPACTS

1. Emission Inventory Analysis

The ARB staff performed an emissions analysis for the inventoried engines eligible to register in the Statewide Registration Program. Estimates of the expected emissions from portable engines from 1996 through 2010, with and without the influence of the Statewide Registration Program were compared. The analysis determined that the implementation of the proposed Regulation would result in long-term reductions in the statewide emissions of criteria pollutants. Results of this analysis are summarized in Appendix G.

To determine the impact of emissions from portable engines, the ARB staff obtained the statewide emission inventory of specific types of engines that are eligible to register in the Statewide Registration Program. Based on information from the *Off-Road Mobile Equipment Emissions Inventory Estimate Draft Report* (Booze, Allen & Hamilton Incorporated, Jan. 1992) and the staff report accompanying SCAQMD Rule 2100, ARB staff estimates that approximately 20 percent of the statewide inventory of emissions from all internal combustion engines can be attributed to portable engines eligible to register in the Statewide Registration Program.

The *Off-Road Mobile Equipment Emissions Inventory Estimate Draft Report* provides information on the percent breakdown of specific engines with a given bhp rating that are portable. The SCAQMD report provides a breakdown of engine population percentages which fall within given bhp ranges. With this information, the ARB staff examined 2 scenarios to compare the difference in emissions from engines registered under the Statewide Registration Program and the same engines continuing to be regulated by the districts.

In the first scenario, staff determined the expected daily criteria pollutant emissions over time without the Statewide Registration Program, taking into account the district programs and expected growth. The second scenario ignores proposed reductions of emissions due to district programs, and includes the expected reductions from the Statewide Registration Program. Using these data, emissions were calculated based on the assumption that 75 percent of eligible engines

would register with the Statewide Registration Program and 25 percent would remain under district regulations. This assumption is consistent with discussions with industry groups, who estimate that 70 to 80 percent of eligible engines would register in the Statewide Registration Program.

2. Emission Comparison Analysis

The proposed Regulation is expected to benefit air quality. It is anticipated that by the year 2010, an overall reduction of criteria pollutant emissions from portable engines and equipment units would be realized when compared to the current district regulation of portable engines and equipment units. Portable internal combustion engines registered under the Statewide Registration Program would be subject to emission control requirements that would become more stringent over time. Equipment units associated with the engines and registered in the Statewide Registration Program would be subject to emission controls which reflect the most stringent district BACT requirements in effect on January 1, 1995. Equipment units that remain under district regulation are not counted towards the emissions change from the baseline inventory of emissions.

Staff estimates that emission reductions resulting from the proposed Regulation would increase over time. A discussion of how emissions estimates were calculated is described in Appendix G.

The estimated NO_x emissions from portable engines registered in the Statewide Registration Program results in reductions over time. The largest emission reduction occurs by 2010. The estimated NO_x emissions from the Statewide Registration Program compared to the existing district programs shows that reduction in emissions are more effective with the existing district programs through 2002, after which the Statewide Registration Program results in greater reductions.

The estimated PM₁₀ emissions from portable engines registered in the Statewide Registration Program results in emission reductions with the largest reduction in 2010. The estimated PM₁₀ emissions from the Statewide Registration Program compared to the existing district programs shows that reductions in emissions are more effective under the existing district programs up to 2005, after which the Statewide Registration Program results in greater emission reductions.

In the short-term, the existing district programs result in greater emission reductions compared to the Statewide Registration Program. These reductions under district programs result from the SCAQMD and VCAPCD having more stringent requirements for some portable engine categories than those initial requirements under the Statewide Registration Program. However, engines and equipment units operated in other districts, registered under the Statewide Registration Program, would be subject to emissions standards that are equivalent to, or more stringent than existing district emission standards. The estimated emissions reductions under the

Statewide Registration Program realized in 2010 result from the ARB's authority to regulate nonroad engines. Federal law preempts districts from regulating nonroad engines. The impact of this recent preemption cannot be accurately assessed.

Emissions presented in this report are based on staff estimates of the percentage of the internal combustion engine emission inventory attributed to portable engines. Currently, most districts do not have accurate inventories of portable engines operating within their jurisdiction. Because portable engines share attributes of both mobile and stationary sources, ARB staff believes that actual emissions from portable engines is some unknown percentage of both mobile and stationary source emission inventory estimates. Until such time as an accurate inventory of portable engines is developed, the true impact of the Statewide Registration Program cannot be determined with any degree of certainty.

The recordkeeping and reporting requirements of the proposed Regulation would provide a more accurate emission inventory for portable engines and equipment units. At a later date ARB staff would be able to more accurately determine the air quality benefits of the Statewide Registration Program.

C. AMBIENT AIR QUALITY STANDARDS

California Health and Safety Code section 41754 requires that the emissions from engines and equipment units registered under the proposed Regulation shall not, in the aggregate, interfere with the attainment or maintenance of State or federal ambient air quality standards. In addition, the emissions from any one portable engine, exclusive of background concentration, shall not cause an exceedance of any ambient air quality standard. The following discussion supports ARB staff's belief that emissions from engines and equipment units registered under the Statewide Registration Program would not have a significant impact on air quality and in the long-term would ensure overall emission reductions beyond existing programs.

Addressing the first portion of this requirement, it is not expected that there would be a significant quantity of new emissions in California as a result of the proposed Regulation. The use of portable engines and equipment units in California is not expected to change. The demand for portable engines and equipment units operated in the State is finite (inelastic). This is similar to dry cleaning and gasoline dispensing operations. ARB staff anticipates that virtually all of the emission units that seek registration in the Statewide Registration Program are currently operating in California under district authority, and would be subject to similar control technology, mass emission limits and/or daily and annual emission limitations as required by local districts. Any emission units new to California that wish to register in the Statewide Registration Program must incorporate Best Available Control Technology, and would be subject to daily and annual emission limitations. In addition, over time engines registered in the Statewide Registration Program would be required to be retrofitted or replaced with cleaner technologies. This requirement would result in an overall decrease in emissions from portable engines registered with

the State versus emissions from engines permitted by districts. In addition, the schedule for retrofitting with cleaner technologies was established to ensure that emissions from portable engines do not interfere with district projected attainment dates.

To address the requirement that the emissions from any one portable engine, exclusive of background concentration, shall not cause an exceedance of any ambient air quality standard, emission impacts from portable engines of various brake horsepower ratings eligible for registration in the statewide program were analyzed. Emissions of nitrogen oxides, carbon monoxide and particulate matter were modeled. The modeling results indicate that downwind emission concentrations from any single engine would not exceed State or federal ambient air quality standards when excluding background concentrations.

Because a conservative modeling approach was used to estimate the impact of emissions from portable engines, ARB staff expect emission impacts to be much lower than the modeled results. For more information refer to Appendix F, Memorandum on Modeling Results for Portable Engines.

D. CEQA CONSIDERATIONS

1. Summary of Environmental Impacts

ARB staff has conducted an analysis of the potential environmental impacts of the proposed Regulation. Based on our analysis, we have determined that the proposed Regulation would not have any significant adverse environmental impacts. Rather, overall, the proposed Regulation would have a positive environmental impact. The following environmental analysis provides the basis for our finding.

2. Legal Requirements Applicable to the Analysis

Both the California Environmental Quality Act (CEQA) and Board policy require the ARB to consider the potential adverse environmental impacts of the proposed Regulation. Because the ARB's program involving the adoption of regulations has been certified by the Secretary of Resources (see Public Resources Codes section 21080.5), CEQA allows the ARB's environmental analysis to be included in the ARB Staff Report or Technical Support Document in lieu of preparing an environmental impact report or negative declaration. In addition, the ARB would respond in writing to all significant environmental points raised by the public during the public review period or at the Board hearing. These responses would be contained in the Final Statement of Reasons for the Statewide Registration Program.

On January 1, 1994, the new requirements of Senate Bill 919 became effective (Stats. 1993, Chapter 1131). Senate Bill 919 amended CEQA by adding new Public Resources Code section 21159. With respect to the proposed Regulation, Public Resources Code section 21159

requires that the environmental analysis conducted by the ARB include, at a minimum, all the following: (1) an analysis of the reasonably foreseeable environmental impacts or the methods of compliance, (2) an analysis of reasonably foreseeable feasible mitigation measures, and (3) an analysis of reasonably foreseeable alternative means of compliance with the proposed Regulation.

In fulfillment of the requirement for analysis of reasonably foreseeable feasible mitigation measures, ARB staff have determined that no mitigation measures are necessary because when considered in the aggregate, ARB staff have identified no significant adverse environmental impacts associated with the proposed Regulation. However, ARB staff would continue to monitor implementation of the proposed Regulation to insure that no adverse impacts occur in the future. In fulfillment of the requirement for an analysis of the reasonably foreseeable alternative means of compliance with the proposed Regulation, alternatives have been studied and no realistic scenarios have been found that would serve as alternatives to the Statewide Registration Program as proposed. The options available to ARB were limited, given the specific mandates of the legislature and the alternative proposals to achieve greater emission reductions on a more expedited schedule were found to be technologically infeasible. See Chapter IV, section C.3, for a full discussion of the control technology alternatives that were considered, and Chapter III, section C.2.h, for discussion of phase-in of cleaner technologies.

3. Emissions Reductions and Other Potential Environmental Impacts

California Health and Safety Code section 41750 et seq. mandates the ARB to adopt a regulation to establish a uniform system to register and regulate portable engines and associated equipment units. The Statewide Registration Program was mandated to facilitate operation in multiple districts and create a uniform statewide program for registering and regulating portable engines and equipment units. A detailed description of the Statewide Registration Program is contained within Chapter III. The proposed Regulation is included as Appendix A. The Statewide Registration Program would have no adverse impacts whatsoever on any area of the environment other than air.

a. Portable Engines

Overall, the Statewide Registration Program would result in significant reductions in air pollution emissions from portable engines. However, in the short-term, there may be some localized increases in emissions. But this finding must be qualified since it is difficult to estimate emissions from portable engines because the present inventory does not contain a specific category for portable engines and such engines exhibit attributes of both stationary and mobile sources. Accordingly, the inventory that has been used to generate the emissions estimates contained in this report is a combination of stationary and mobile source emissions estimates. To address this shortcoming, the staff used liberal assumptions to determine the portable engine portion of the total inventory. As a consequence, the emissions from these engines may have been overestimated. This, in turn, could indicate a false short-term adverse impact of the Statewide Registration Program on air quality. A summary of emission estimates from portable engines is

contained in Appendix G. Potential air quality impacts from the proposed Regulation are discussed in the findings below.

Accepting the worst case emission inventory estimates, during the initial implementation of the Statewide Registration Program for portable engines, small localized emission increases may occur in isolated areas in the SCAQMD and Ventura County Air Pollution Control District (VCAPCD). During the first years of the Statewide Registration Program, the program registering portable engines may not achieve emission reduction comparable to those achieved under SCAQMD Rule 1110.2 (adopted August 3, 1990), the applicable district rule for portable engines. However, as more restrictive requirements become effective in the Statewide Registration Program overall emission reductions should be realized.

Similarly, the Statewide Registration Program may not achieve emissions reductions comparable to those achieved under VCAPCD Rule 74.16 (adopted January 8, 1991) which requires that equipment used in oil field drilling operations be connected to electrical grid power. However, under the district rule, when it can be shown that electrical grid power is not economically or technologically feasible, an emission standard for engines powering the rigs must be met. The rule requires a site-specific analysis of feasibility for each permitted piece of equipment. The Statewide Registration Program does not require electrification because ARB lacks the resources and ability to perform a site-specific analysis as required by the district rule. In lieu of electrification, the proposed Regulation would require specific control technologies, mass emission limitations, and phase-in of cleaner engine technologies. Although ARB staff anticipates that there may be a short-term increase in emissions from drilling operations in VCAPCD, overall ARB expects the Statewide Registration Program to result in emission reductions because it would phase-in cleaner engine technologies for other types of registered portable engines used in the district, including oil drilling operation, not requiring electrification.

The special circumstances of the SCAQMD and VCAPCD did not exist elsewhere in the State. It is anticipated that the Statewide Registration Program would significantly increase the number of portable engines subject to emission controls, and other more stringent standards that would be imposed under the program. In the aggregate, this would result in significant emissions reductions statewide.

b. Portable Equipment Units

Portable equipment units, portable engine associated processes, would be required under the Statewide Registration Program to meet the most stringent district BACT requirements. Accordingly, ARB staff does not expect any emission increases from this equipment to occur because of registration in the Statewide Registration Program. Under the Statewide Registration Program, equipment units subject to federal stationary source requirements such as, Title V, New Source Performance Standards, and Prevention of Significant Deterioration (as described in Chapter III) would not qualify for registration. As a result, it is anticipated that the universe of equipment qualifying for registration would be limited, and no adverse environmental impact

should result from the registration of qualifying equipment.

APPENDICES

- A. Proposed Regulation to Establish a Statewide Portable Equipment Registration Program
- B. Assembly Bill 531
- C. Assembly Bill 2635
- D. Senate Bill 1880
- E. U.S. EPA Letter re: stationary vs. nonroad
- F. Memorandum on Modeling Results for Portable Engines
- G. Emission Impacts of Statewide Registration Program
- H. California Air Pollution Control districts

Appendix A:

**PROPOSED REGULATION TO ESTABLISH A STATEWIDE PORTABLE
EQUIPMENT REGISTRATION PROGRAM**

Proposed Regulation to Establish a Statewide Portable Equipment Registration Program

California Air Resources Board

Adopt new article 5 and sections 2450 - 2465, Title 13, California Code of Regulations, to read as follows:

(Note: the entire text of sections 2450 - 2465 set forth below is new language proposed to be added to the California Code of Regulations, therefore the proposed regulation text will be shown in normal type.)

Article 5. Portable Engine and Equipment Registration

§ 2450. Purpose.

This regulation establishes a statewide program for the registration and regulation of portable engines and engine-associated equipment (portable engines and equipment units) as defined herein. Portable engines and equipment units registered under the Air Resources Board program may operate throughout the state of California without authorization or permits from air quality management or air pollution control districts (districts). This regulation preempts districts from permitting, registering, or setting emission standards or limits for portable engines and equipment units registered with the Executive Officer of the Air Resources Board.

§ 2451. Applicability.

- (a) Except for (d) of this section, registration under this regulation is voluntary for owners and operators of portable engines or equipment units.
- (b) This regulation applies to portable engines and equipment units. Except as provided in paragraph (c), any portable engine or equipment unit, as defined in section 2452 may register under this regulation. Examples include, but are not limited to:
 - (1) portable equipment units driven solely by portable engines including, confined abrasive blasting, Portland concrete batch plants, sand and gravel screening, rock crushing, unheated pavement recycling and crushing operations, and unconfined abrasive blasting;

- (2) consistent with section 209(e) of the federal Clean Air Act, engines used in conjunction with the following types of portable operations: well drilling, service or work-over rigs; power generation, excluding cogeneration; pumps; compressors; diesel pile-driving hammers; welding; cranes; woodchippers; dredges; equipment necessary for the operation of portable engines and equipment units; and military tactical support equipment.

[Note: Under section 209 (e)(1) of the federal Clean Air Act (CAA) [42 U.S.C. 7543 (e)(1)], California is preempted from establishing emission standards or other requirements related to the control of emission (other than in-use operational controls) for engines under 175 horsepower used in new farm and construction operations, as defined by the U.S. EPA in 40 Code of Federal Regulations (CFR) Part 85, Subpart Q, Section 85.1601 et. Seq. [see 59 Fed. Reg. 36969 (July 20, 1994)]. Federal preemptions should only affect engines less than 175 horsepower used in construction operations because as stated in section (c)(2) below, state law exempts agricultural operations from permit and registration programs. Accordingly, references to the federal preemptions as they apply to this regulation will refer to requirements to construction equipment using engines less than 175 horsepower.

See *Engine Manufacturers Association v. EPA*, (88 F.3d1075 [D.C. Cir. 1996]). Under section 209 (e)(2) [42 U.S.C. 7543 (e)(2)], of the CAA, California is required to receive authorization from the U.S. EPA prior to enforcing its regulations for nonroad equipment not otherwise preempted under section 209 (e)(1). See *Engine Manufacturers Association*, (supra). ARB has to date received authorization for regulations covered in Title 13, California Code of Regulation sections 2400-2407 (see 54 Fed. Reg. 37440 [July 20, 1995]) and sections 2420-2427 (see 59 Fed. Reg. 48981 [September 21, 1995]).

- (c) The following are not eligible for registration under this program:
 - (1) any engine used to propel mobile equipment or a motor vehicle of any kind;
 - (2) any portable engine or equipment unit used exclusively in agricultural operations, as defined in California Health and Safety Code section 42310 (e);
 - (3) any engine or equipment unit not meeting the definition of portable as defined in section 2452 (w) of this regulation;
 - (4) any equipment unit determined by the Executive Officer to qualify as part of a stationary source permitted by a district; and
 - (5) any portable engine or equipment unit subject to an applicable federal New Source Performance Standards (NSPS) or Maximum Achievable Control Technology (MACT) standard or National Emissions Standards for Hazardous Air Pollutants (NESHAP).

- (d) In the event that the owner or operator of a portable engine or equipment unit elects not to register under this program, the unregistered portable engine or equipment unit shall be subject to district permitting requirements pursuant to district regulations. However, registration under this program is mandatory for those portable engines rated at 50 bhp or greater that are located in a district having a permit or registration program applicable to portable engines that was in effect on or before January 1, 1997, the Executive Officer has determined that the district program has been effectively preempted.
 - (1) For the purpose of this provision, a permit or registration program applicable to portable engines is defined as a program which establishes, emission control technology requirements, in-use operational controls (e.g., daily or annual emission limits), or proposed control measures contained in the State Implementation Plan.
 - (2) Upon determining that a district program has been preempted as to specific engines by the federal Clean Air Act, the Executive Officer will issue an Executive Order setting forth such findings. Affected owners and/or operators of portable engines will be notified within 30 days by the ARB and/or districts of the issuance of the Executive Order and shall, within 180 days of issuance of the Executive Order, submit an application for registration under this regulation.

§ 2452. Definitions.

- (a) **Air Contaminant** means any discharge, release, or other propagation into the atmosphere and includes, but is not limited to smoke, dust, soot, grime, carbon, fumes, gases, odors, particulate matter, acids, or any combination thereof.
- (b) **ARB** means the California Air Resources Board.
- (c) **Construction Equipment** means equipment that uses an engine and that is primarily used (as defined below) in construction and operated at commercial construction sites.
- (d) **District** means an air pollution control district or air quality management district created or continued in existence pursuant to provisions of Part 3 (commencing with section 40000) of the California Health and Safety Code.
- (e) **Emergency** means any situation arising from sudden and reasonably unforeseen natural disaster such as earthquake, flood, fire, or other acts of God, or other unforeseen events beyond the control of the portable engine or equipment unit

operator, its officers, employees, and contractors that threaten public health and safety and that requires the immediate temporary operation of portable engines or equipment units to help alleviate the threat to public health and safety.

- (f) **Engine** means any piston driven internal combustion engine.
- (g) **Equipment Unit** means equipment that emits air contaminants over and above those emitted from the portable engine and is associated with, and driven solely by, any portable engine. Equipment units may include equipment necessary for the operation of a portable engine (e.g., fuel tanks).
- (h) **Equivalent Replacement** means a substitution of one or more registered portable engine(s) or equipment unit(s) with a portable engine or equipment unit that is intended to perform the same or similar function as the original portable engine or equipment unit, and where the following conditions exist:
 - (1) the replacement engine or equipment unit results in equal or lower air contaminant emissions than the existing engine or equipment unit (or sum of existing engines or equipment units) expressed as a mass per unit time (limitations on capacity or hours of operation shall not be taken into account in qualifying for lower air contaminant emissions);
 - (2) the replacement engine or equipment unit meets the emission control technology requirements of this article contained in section 2456 and 2457;
 - (3) the rated brake horsepower of the replacement engine does not exceed the rated brake horsepower of the existing engine (or sum of existing engines), by more than 20 percent. For every percentage point increase of the rated brake horsepower, there shall be an associated decrease in emissions of nitrogen oxides, expressed as a mass per unit time, equal to or exceeding two percentage points; and
 - (4) the manufacturer's maximum rated capacity of the replacement equipment unit does not exceed the maximum rated capacity of the existing equipment unit.
- (i) **Executive Officer** means the Executive Officer of the California Air Resources Board or his designee.
- (j) **Farm Equipment** means equipment that uses an engine and that is primarily used (as defined below) in the commercial production and or commercial harvesting of food, fiber, wood, or commercial organic products or in the processing of such products for further use on a farm.
- (k) **Hazardous Air Pollutant (HAP)** means any air contaminant that is listed pursuant to section 112(b) of the federal Clean Air Act.

- (l) **Identical Replacement** means a substitution of a registered portable engine or equipment unit with another portable engine or equipment unit that has the same manufacturer, type, model number, manufacturer's maximum rated capacity, and rated brake horsepower; and is intended to perform the same or similar function as the original portable engine or equipment unit; and has equal or lower emissions expressed as mass per unit time; and meets the emission control technology requirements of sections 2455 through 2457 of this regulation.
- (m) **Location** means any single site at a building, structure, facility, or installation.
- (n) **Maximum Achievable Control Technology (MACT)** means any federal requirements promulgated as part of 40 CFR Parts 61 and 63.
- (o) **Maximum Rated Capacity** is the maximum throughput rating or volume capacity listed on the nameplate of the portable equipment unit as specified by the manufacturer.
- (p) **Maximum Rated Horsepower (brake horsepower); (bhp)** is the maximum brake horsepower rating specified by the portable engine manufacturer and listed on the nameplate of the portable engine.
- (q) **Military Tactical Support Equipment (TSE)** means equipment using a portable engine, including turbines, that meets military specifications, owned by the U.S. Department of Defense and/or the U.S. military services, and used in combat, combat support, combat service support, tactical or relief operations, or training for such operations. Examples include, but are not limited to, internal combustion engines, associated with portable generators, aircraft start carts, heaters and lighting carts.
- (r) **Modification** means any physical change in portable engine or equipment unit method of operation, or an addition to an existing portable engine or equipment unit, which may cause or result in the issuance of air contaminants not previously emitted. Routine maintenance and/or repair shall not be considered a physical change. Unless previously limited by an enforceable registration condition, a change in the method of operation shall not include:
- (1) an increase in the production rate, unless such increase will cause the maximum design capacity of the portable equipment unit to be exceeded;
 - (2) an increase in the hours of operation;
 - (3) a change of ownership; and
 - (4) the movement of a portable engine or equipment unit from one location to another;

- (s) **New Nonroad Engine** means a domestic or imported nonroad engine the equitable or legal title to which has never been transferred to an ultimate purchaser. Where the equitable or legal title to an engine is not transferred to an ultimate purchaser until after the engine is placed into service, then the engine will no longer be new after it is placed into service. A nonroad engine is placed into service, when it is used for its functional purposes. The term ultimate purchaser means, with respect to new nonroad engine, the first person who in good faith purchases new nonroad vehicle or new nonroad engine for purposes other than resale.
- (t) **New Source Performance Standards (NSPS)** means any federal requirements promulgated as part of 40 CFR Part 60.
- (u) **Non-operational** means a portable engine or equipment unit that an owner or operator has demonstrated to the satisfaction of the Executive Officer as residing in the state but not operating. A portable engine or equipment unit determined to be non-operational may not operate under the registration program.
- (v) **Nonroad Engine** means:
 - (1) Except as discussed in paragraph (2) of this definition, a nonroad engine is any engine:
 - (A) in or on a piece of equipment that is self-propelled or serves a dual purpose by both propelling itself and performing another function (such as garden tractors, off-highway mobile cranes and bulldozers); or
 - (B) in or on a piece of equipment that is intended to be propelled while performing its function (such as lawnmowers and string trimmers); or
 - (C) that, by itself or in or on a piece of equipment, is portable or transportable, meaning designed to be and capable of being carried or moved from one location to another. Indicia of transportability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform.
 - (2) An engine is not a nonroad engine if:
 - (A) the engine is used to propel a motor vehicle or a vehicle used solely for competition, or is subject to standards promulgated under section 202 of the federal Clean Air Act; or
 - (B) the engine is regulated by a federal New Source Performance

Standard promulgated under section 111 of the federal Clean Air Act; or

- (C) the engine otherwise included in paragraph (1)(C) of this definition remains or will remain at a location for more than 12 consecutive months or a shorter period of time for an engine located at a seasonal source. Any engine (or engines) that replaces an engine at a location and that is intended to perform the same or similar function as the engine replaced will be included in calculating the consecutive time period. An engine located at a seasonal source is an engine that remains at a seasonal source during the full annual operating period of the seasonal source. A seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location approximately three (or more) months each year.
- (w) **Portable** means designed and capable of being carried or moved from one location to another. Indicia of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. For the purposes of this regulation, dredge engines on a boat or barge are considered portable. The engine or equipment unit is not portable if any of the following are true:
- (1) the engine or equipment unit or its replacement is attached to a foundation, or if not so attached, will reside at the same location for more than 12 consecutive months. Any engine or equipment unit such as back-up or stand-by engines or equipment units, that replace engine(s) or equipment unit(s) at a location and is intended to perform the same or similar function as the engine(s) or equipment unit(s) being replaced, will be included in calculating the consecutive time period. In that case, the cumulative time of all engine(s) or equipment unit(s), including the time between the removal of the original engine(s) or equipment unit(s) and installation of the replacement engine(s) or equipment unit(s), will be counted toward the consecutive time period; or
 - (2) the engine or equipment unit remains or will reside at a location for less than 12 consecutive months if the engine or equipment unit is located at a seasonal source and operates during the full annual operating period of the seasonal source, where a seasonal source is a stationary source that remains in a single location on a permanent basis (i.e., at least two years) and that operates at that single location at least three months each year; or
 - (3) the engine or equipment unit is moved from one location to another in an attempt to circumvent the portable residence time requirements.

[The period during which the engine or equipment unit is maintained at a storage facility shall be excluded from the residency time determination.]

- (x) **Prevention of Significant Deterioration (PSD)** means any federal requirements promulgated as part of 40 CFR Part 52.
- (y) **Primarily Used** is a determination by U.S. EPA under section 209 (e) of the federal Clean Air Act, that 51 percent or more of a specific type of engine or equipment, with an engine under 175 maximum brake horsepower (bhp) rating; is used in the farm and construction industries.
- (z) **Process** means any air contaminant emitting activity associated with the operation of a portable engine.
- (aa) **Project** means one or more registered portable engines or equipment units operated at one location under the same or common ownership or control, and used to perform a single activity.
- (bb) **Registration** means issuance of a certificate by the Executive Officer acknowledging expected compliance with the applicable requirements of this regulation and the intent by the owner or operator to operate said portable engine or equipment unit within the requirements established by this regulation as it pertains to portable engines and equipment units.
- (cc) **Rental Business** means a business where the principal use of its engines or equipment units is to temporarily rent or lease for profit, portable engines or equipment units to operators other than the owner(s) of the engine or equipment unit.
- (dd) **Renter** is a person who rents a portable engine or equipment unit from a rental business.
- (ee) **Resident Engine** is:
 - (1) a portable engine that at the time of applying for registration, has a current, valid district permit or registration issued in accordance with local district requirements on or before [the effective date of this regulation]; or
 - (2) a portable engine that resided in the State of California at any time during calendar year 1995 and an application for registration is submitted to the Executive Officer no later than one year from [the effective date of this regulation]; or
 - (3) a portable engine where a permit or registration has not been granted by a district, but an application, accepted and deemed complete by the district prior to [the effective date of this regulation], and an application for registration is submitted to the Executive Officer no later than one year from [the effective date of this regulation]; or

- (4) a portable engine where registration becomes mandatory pursuant to section 2451 (d) of this regulation.

[The owner or operator shall provide sufficient documentation to prove the portable engine's residency to the satisfaction of the Executive Officer. Examples of adequate documentation are existing permits issued by a district, tax records, and usage or maintenance records. With the exception of section 2456 (e)(8) of this regulation, an equivalent or identical replacement engine replacing a registered resident engine shall be treated as a resident engine.]

- (ff) **Stationary Source** means any building, structure, facility or installation which emits any affected pollutant directly or as a fugitive emission. Building, structure, facility, or installation includes all pollutant emitting activities which:

- (1) are under the same ownership or operation, or which are owned or operated by entities which are under common control;
- (2) belong to the same industrial grouping either by virtue of falling within the same two-digit standard industrial classification code or by virtue of being part of a common industrial process, manufacturing process, or connected process involving a common raw material; and
- (3) are located on one or more contiguous or adjacent properties.

[For the purposes of this regulation a stationary source and nonroad engine are mutually exclusive.]

- (gg) **Storage** means a warehouse, enclosed yard or other area established for the primary purpose of maintaining portable engines or equipment units when not in operation.
- (hh) **Transportable** means the same as portable.
- (ii) **Volatile Organic Compound (VOC)** means any compound containing at least one atom of carbon except for the following exempt compounds: acetone, ethane, parachlorobenzotrifluoride (1-chloro-4-trifluoromethyl benzene), methane, carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, ammonium carbonates, methylene chloride (dichloromethane), methyl chloroform (1,1,1-trichloroethane), CFC-113 (trichlorotrifluoroethane), CFC-11 (trichlorofluoromethane), CFC-12 (dichlorodifluoromethane), CFC-22 (chlorodifluoromethane), CFC-23 (trifluoromethane), CFC-114 (dichlorotetrafluoroethane), CFC-115 (chloropentafluoroethane), HCFC-123 (dichlorotrifluoroethane), HFC-134a (tetrafluoroethane), HCFC-141b (dichlorofluoroethane), HCFC-142b (chlorodifluoroethane), HCFC-124 (chlorotetrafluoroethane), HFC-23 (trifluoromethane), HFC-134

(tetrafluoroethane), HFC-125 (pentafluoroethane), HFC-143a (trifluoroethane), HFC-152a (difluoroethane), cyclic, branched, or linear completely methylated siloxanes, the following classes of perfluorocarbons:

- (1) cyclic, branched, or linear, completely fluorinated alkanes;
- (2) cyclic, branched, or linear, completely fluorinated ethers with no unsaturations;
- (3) cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations; and
- (4) sulfur-containing perfluorocarbons with no unsaturations and with the sulfur bonds to carbon and fluorine, acetone, ethane, and parachlorobenzotrifluoride (1-chloro-4-trifluoromethyl benzene).

(jj) **U.S. EPA** means the United States Environmental Protection Agency.

§ 2453. Application Process.

- (a) In order for an engine or equipment unit to be considered for registration by the Executive Officer, the engine or equipment unit must be portable as defined in section 2452 (w) of this regulation and meet all applicable requirements established in this regulation.
- (b) An owner or operator of a registered portable engine or equipment unit is not required to complete a new application for an identical replacement and may immediately operate the identical replacement. Except for TSE, the owner or operator shall notify the Executive Officer in writing within five calendar days of replacing the registered portable engine or equipment unit with an identical replacement. Notification shall include company name, contact, phone number, registration certificate number of the portable engine or equipment unit to be replaced; and make, model, rated brake horsepower, serial number of the identical replacement; and applicable fees as required in section 2461. Misrepresentation of portable engine or equipment unit information and failure to meet the requirements of this article shall subject the owner or operator to section 2465.
- (c) Except for TSE, the owner or operator of a registered portable engine or equipment unit shall file a new application for registration, including the surrender of the registration certificate for the portable engine or equipment unit being replaced, and appropriate fees as required in section 2461, with the Executive Officer prior to operating the equivalent replacement. Failure to meet the requirements of this article prior to operating equivalent replacement may subject the owner or operator to section 2465 of this article.

- (d) For the purposes of registration under this article, an owner or operator of a portable engine or equipment unit shall file a complete application, pursuant to this regulation, with the Executive Officer in accordance with the following schedule:
- (1) portable engines or equipment units with current, valid district permits issued prior to [the effective date of this regulation], shall apply before January 1, 2001;
 - (2) resident engines or equipment units that do not have current, valid district permits issued prior to [the effective date of this regulation] no later than one year from [the effective date of regulation];
 - (3) TSE residing within the state as of [the effective date of this regulation], no later than six months from [the effective date of this regulation]; and
 - (4) all others may apply at any time.
- (e) The Executive Officer shall inform the applicant, in writing, if the application is complete or deficient. If deemed deficient, the Executive Officer shall identify the specific information required to make the application complete, according to the following schedule:
- (1) within 45 days of receipt of an application, for applications received within one year after [the effective date of this regulation]; and
 - (2) within 30 days of receipt of an application, for applications received after [one year following the effective date of this regulation].
- (f) The Executive Officer shall issue or deny registration according to the following schedule:
- (1) within 180 days of receipt of an application, for applications received within one year after [the effective date of this regulation]; and
 - (2) within 90 days of receipt of an application, for applications received after [one year following the effective date of this regulation].
- (g) Upon finding that a portable engine or equipment unit meets the requirements of this article, the Executive Officer shall issue a registration for the portable engine or equipment unit. The Executive Officer shall notify the applicant in writing that the portable engine or equipment unit has been registered. The notification shall include a registration certificate(s), any conditions to ensure compliance with state and federal requirements, and a registration identification for each registered portable engine or equipment unit. Except for TSE, the registration identification shall be maintained on the registered portable engine or equipment unit at all times. Failure to properly maintain registration identification shall be deemed a violation of this article.

- (h) Except for TSE, each application for registration and the appropriate fee(s) as specified in section 2461, shall be submitted in a format approved by the Executive Officer and include, at a minimum, the following information:
- (1) indication of portable engine or equipment unit status (e.g., resident, non-resident, non-operational, rental business, etc.);
 - (2) indication of “home” district, the district in which the portable engine or equipment unit operates most of the time (optional);
 - (3) the name of applicant, and a contact person including mailing address and telephone number;
 - (4) a brief description of typical portable engine or equipment unit use;
 - (5) detailed description, including portable engine or equipment unit make, model, manufacture year (for portable engines only), rated brake horsepower, throughput, capacity, emission control equipment, and serial number;
 - (6) necessary engineering data, emissions test data, or manufacturer’s emissions data to demonstrate compliance with the requirements as specified in sections 2455-2457;
 - (7) for resident engines, a copy of a current permit to operate or a registration certificate that was granted by a district prior to [the effective date of this regulation], or other proof of California residency as described in section 2452 (ee); and
 - (8) the signature of responsible official and date of the signature.
- (i) For TSE, application for registration and the appropriate fee(s) as specified in section 2461, shall be submitted in a format approved by the Executive Officer and include, at a minimum, the following information:
- (1) the name of applicant, and a contact person including mailing address and telephone number;
 - (2) a brief description of typical portable engine or equipment unit use;
 - (3) portable engine or equipment unit description, including type and rated brake horsepower; and
 - (4) the signature of responsible official and date of the signature.
- (j) Portable engines or equipment units owned and operated for the primary purpose of rental by a rental business shall be identified as rental at the time of application for registration and shall be issued registration specific to the rental business requirements of this article. Portable engines or equipment units used primarily for purposes other than rental or not owned by a rental business shall not qualify for registration as a rental business. Misrepresentation of portable engine or equipment unit use in an attempt to qualify under the rental business definition shall subject the owner or operator to section 2465 of this article.

- (k) An owner or operator registering a portable engine or equipment unit as non-operational may choose to have the equipment evaluated for registration eligibility at the time the initial application is filed or at the time the portable engine or equipment unit is changing to operational status. Where an initial evaluation is performed, switching from non-operational status to operational status requires notification in writing to the Executive Officer of the change in operational status and payment of all applicable fees prior to operation. Where no initial evaluation is performed, switching from non-operational status to operational status requires a complete application to be filed and approved by the Executive Officer and payment of all applicable fees prior to operation.
- (l) Once registration is issued by the Executive Officer, any valid district permits or registrations for registered portable engines or equipment units are preempted by the statewide registration and are therefore considered null and void.

§ 2454. Registration Process.

- (a) The Executive Officer shall make registration data available to districts (e.g., on the Internet).
- (b) The Executive Officer may conduct an inspection of a portable engine or equipment unit and/or require a source test in order to verify compliance with the requirements of this article prior to issuance of registration.
- (c) After obtaining registration in accordance with this article, the owner or operator of registered portable engines or equipment units may operate within the boundaries of the State of California so long as such portable engines or equipment units comply with all applicable requirements of this article and any other applicable federal or state law.
- (d) Districts shall provide the Executive Officer with written reports or electronic submittals via the Internet, describing any inspections and the nature and outcome of any violation of local, state or federal laws by the owner or operator of registered portable engines or equipment units. The Executive Officer will provide all districts with such information (e.g., on the Internet).

§ 2455. General Requirements.

- (a) The emissions from portable engines or equipment units registered under this regulation shall not, in the aggregate, interfere with the attainment or maintenance

of state or federal ambient air quality standards and the emissions from any one portable engine or equipment unit, exclusive of background concentration, shall not cause an exceedance of any ambient air quality standard. This paragraph shall not be construed as requiring portable engine or equipment unit operators to provide emission offsets for a portable engine or equipment unit registered under this regulation.

- (b) Portable engines or equipment units registered under this regulation shall comply with article 1, chapter 3, part 4, division 26, of the California Health and Safety Code, commencing with sections 41700.
- (c) Except for portable engines or equipment units permitted or registered by a district in which an emergency occurs, a portable engine or equipment unit operated during an emergency as defined in section 2452 (e) of this article, is considered registered under the requirements of this regulation for the duration of the emergency and is exempt from sections 2455 through 2459 of this article for the duration of the emergency provided the owner or operator notifies the Executive Officer within 24 hours of commencing operation. The Executive Officer may for good cause refute that an emergency under this provision exists. If the Executive Officer deems that an emergency does not exist, all operation of portable engines and equipment units covered by this provision shall cease operation immediately upon notification by the Executive Officer. Misrepresentation of an emergency and failure to cease operation under notice of the Executive Officer is a violation of this article and may subject the owner or operator to section 2465 of this article.
- (d) For the purposes of registration under this article, the owner or operator of any registered portable equipment unit whose operation at a given location is within 15 kilometers of a Class I area must notify the U.S. EPA and comply with any applicable provisions of the Prevention of Significant Deterioration program.

§ 2456. Engine Requirements

- (a) For TSE, no air contaminant shall be discharged into the atmosphere, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated as No. 2 on the Ringlemann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke designated as No. 2 on the Ringlemann Chart. No other requirements of this section are applicable to TSE.
- (b) A new nonroad engine rated less than 175 bhp used in construction equipment as defined in 40 CFR Part 85, Subpart Q, section 85.1601 et seq. shall use only fuels

meeting the standards for California motor vehicle fuels as set forth in chapter 5, division 3, Title 13, of the California Code of Regulations, commencing with section 2250; comply with the applicable daily and annual emission limits contained in section 2456 (i) of this article; and is exempt from further requirements of this section.

- (c) Diesel pile-driving hammers shall comply with the applicable provisions of section 41701.5 of the California Health and Safety Code and are otherwise exempt from further requirements of this section.
- (d) To be registered in the Statewide Registration Program, a registered portable engine rated less than 50 bhp shall comply with the most stringent requirements, if any, for its horsepower and year of manufacture rating set forth in CFR 40 Part 89 or Title 13 California Code of Regulations which is in effect at the time application for registration is deemed complete by the Executive Officer. If no emission standards exist for that horsepower and year of manufacture at the time of registration, the engine shall comply with the applicable daily and annual emission limits contained in section 2456 (i) of this article. No other requirements of this section are applicable to portable engines rated less than 50 bhp.
- (e) Portable engines registered under this regulation shall:
 - (1) comply with the applicable daily and annual emission limits contained in section 2456 (i) of this article;
 - (2) use only fuels meeting the standards for California motor vehicle fuels as set forth in chapter 5, division 3, Title 13, of the California Code of Regulations, commencing with section 2250;
 - (3) not exceed particulate matter emissions concentration of 0.1 grain per standard dry cubic feet corrected to 12% CO₂;
 - (4) not discharge air contaminants into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as or darker than Ringlemann 1 or equivalent 20 percent opacity;
 - (5) for an engine manufactured before January 1, 1996, meet the applicable requirements of Table 1, for compression-ignition engines or Table 2, for spark-ignition engines;
 - (6) for an engine manufactured on or after January 1, 1996, meet the most stringent emissions standard;
 - (7) except for an engine that qualifies as a resident engine, any portable engine, regardless of engine manufacture date, registering on or after July 1, 1998, meet the most stringent emissions standards for the applicable horsepower range specified for State- or federally-certified newly-manufactured engines; if no emissions standards exists, then the applicable requirements contained in Table 1 or Table 2 must be met;

- (8) on or after July 1, 2001, except for change of ownership, applications filed for registration or replacement of a registered portable engine, meet the most stringent emissions standard; and
- (9) after January 1, 2010, any registered portable engine rated 50 bhp or above not previously meeting a federal or California standard pursuant to CFR 40 Part 89 or Title 13 of the California Code of Regulations, meet the most stringent emissions standard (resident portable engine must reapply at this time and demonstrate compliance with the most stringent emissions standard).

For the purpose of sub-section (e), the most stringent emissions standard shall be the applicable emissions standard in effect at the time an application is deemed complete and set forth in Title 13 of the California Code of Regulations for that engine rating. If no emissions standard exists under the California Code of Regulations, then the applicable emissions standard set forth in CFR 40 Part 89 shall apply. If no standard exists under the California Code of Regulations or CFR 40 Part 89, then the applicable requirements of Table 1 for compression-ignition engines or Table 2 for spark-ignition engines shall apply. Any engine meeting the most stringent emission standard, as defined above, is not subject to requirements (3) and (4) of sub-section (e).

- (f) Subject to Executive Officer approval, the owner or operator of a registered portable engine may obtain a temporary exemption, not to exceed 18 months in duration, from daily and annual emission limits by submitting a compliance plan (in a format to be specified by prior agreement with the Executive Officer) to replace the existing portable engine with a newly manufactured engine or modify the existing portable engine to satisfy the requirements that have been set for new engines under CFR 40 part 89 or Title 13 of the California Code of Regulations. For the purposes of this section, a compliance plan shall include at a minimum:

- (1) registration number of portable engine being replaced or modified;
- (2) a schedule of increments of progress, which will be taken to replace or modify the registered portable engine;
- (3) the proposed date of replacement or completion of modifications;
- (4) the name of applicant, and a contact person including mailing address and telephone number;
- (5) a brief description of typical portable engine use;
- (6) newly manufactured portable engine description, including portable engine make, model, manufacture year, rated brake horsepower, emission control engine, and serial number;
- (7) detailed description of proposed modifications, including make and model of any add-on equipment;
- (8) all necessary engine engineering data, emissions test data, or

- manufacturer's emissions data to demonstrate compliance with the requirements as specified in section 2456; and
- (9) the signature of responsible official and date of the signature.

[An owner or operator may revise a compliance plan by submitting a modified plan to the Executive Officer at least 30 calendar days prior to the date of replacing or modifying the portable engine. The modified compliance plan shall not extend the temporary exemption from daily and annual emission limits for the registered portable engine beyond 18 months. Misrepresentation of portable engine information in the compliance plan or failure to comply with an approved compliance plan may result in the registration being revoked and the owner or operator being subject to penalties.]

- (g) A registered portable engine owned and operated by a rental business and designated for use as a rental engine, shall have operational and properly maintained non-resettable time meters or an alternate method, as approved by the Executive Officer, for purposes of complying with the requirements of section 2458.
- (h) Subject to Executive Officer approval, 4-degree injection timing retard is not required for compression-ignition engines if it can be demonstrated that it is technologically infeasible for specific types of engines. The Executive Officer shall consider, but is not limited to considering, the following types of documentation in making his or her determination: a cost effectiveness study or an engineering analysis showing a high probability of engine damage. The Executive Officer shall grant exemptions or require reduced injection timing (e.g., 3-, 2- or 1- degree) as determined appropriate on a case-by-case basis. The exemption or reduced requirement shall be applicable to all identical engines of the same make, model, model-year, and configuration.
- (i) Registered portable engines shall not exceed the following emission limits:
- (1) 550 pounds per day per engine of carbon monoxide (CO);
 - (2) 150 pounds per day per engine of particulate matter less than 10 microns (PM₁₀);
 - (3) 10 tons for each pollutant per district per year per engine;
 - (4) 100 pounds nitrogen oxides (NOx) per project per day in SCAQMD only; and
 - (5) for non resident engines, 100 pounds NOx per engine per day in all districts except SCAQMD [An owner may substitute SCAQMD permit or registration limits in effect on or before [the effective date of this regulation] (optional)].

[A portable engine meeting an applicable emissions standard, as set forth in Title 13 of the California Code of Regulations, CFR 40 Part 89, is exempt from the daily and annual emission limits specified above.]

- (j) Portable engines operated for dredging, deemed by the Executive Officer to operate on a continuous basis rather than intermittently on any given day, shall install selective catalytic reduction (SCR) or equivalent control technology as approved by the Executive Officer, that results in NO_x emissions equal to or less than 130 ppm_{dv} corrected to 15 percent oxygen averaged over 15 minutes (1.7 g/bhp-hr). Portable engines operated for dredging deemed not to operate on a continuous basis shall meet the requirements for their respective ratings set forth in this section.
- (k) Registered TSE is exempt from district New Source Review and Title V programs, including any offset requirements. Further, emissions from registered TSE shall not be included in Title V or New Source Review applicability determinations.

Table 1 Compression-ignition Engine Requirements*

Rated Brake Horsepower	Resident Engine	Non-resident Engine
50-116	810 ppm _{dv} NO _x (10.5 g/bhp-hr)** or turbocharger or 4-degree injection timing retard***	770 ppm _{dv} NO _x (10.0 g/bhp-hr)** or turbocharger and 4-degree injection timing retard***
117-399	770 ppm _{dv} NO _x (10.0 g/bhp-hr)** or turbocharger and aftercooler/intercooler or 4-degree injection timing retard***	550 ppm _{dv} NO _x (7.2 g/bhp-hr)** or turbocharger and aftercooler/intercooler and 4-degree injection timing retard***
400-749	550 ppm _{dv} NO _x (7.2 g/bhp-hr)** or turbocharger and aftercooler/intercooler or 4-degree injection timing retard***	535 ppm _{dv} NO _x (7.0 g/bhp-hr)** or turbocharger and aftercooler/intercooler and 4-degree injection timing retard***
750+	550 ppm _{dv} NO _x (7.2 g/bhp-hr)** or turbocharger and aftercooler/intercooler or 4-degree injection timing retard***	535 ppm _{dv} NO _x (7.0 g/bhp-hr)** or turbocharger and aftercooler/intercooler and 4-degree injection timing retard***

* These requirements are in addition to requirements of section 2455 and 2456.

** For the purpose of compliance with this article, ppm_{dv} is parts per million NO_x as NO₂ @ 15 percent oxygen averaged over 15 consecutive minutes. Limits of ppm_{dv} are the approximate equivalent to the stated grams per brake horsepower hour limit based on assuming the engine is 35 percent efficient.

*** Requirements for 4-degree injection timing retard is not required where it can be demonstrated technologically infeasible to the satisfaction of the Executive Officer. (Refer to paragraph h)

Table 2 Spark-ignition Engine Requirements*

Engine Status	Pollutant Emission Limits or Control Technology		
	NO _x	VOC	CO
Resident	213 ppm _{dv} NO _x (4.0 g/bhp-hr)** or catalyst***	800 ppm _{dv} VOC (5.0 g/bhp-hr) or catalyst***	25,344 ppm _{dv} CO (288 g/bhp-hr) or catalyst***
Non-Resident	80 ppm _{dv} NO _x (1.5 g/bhp-hr)**	240 ppm _{dv} VOC (1.5 g/bhp-hr)	176 ppm _{dv} CO (2.0 g/bhp-hr)

* These requirements are in addition to requirements of section 2455 and 2456.

** For the purpose of compliance with this article, ppm_{dv} is parts per million NO_x as NO₂ @ 15 percent oxygen averaged over 15 consecutive minutes. Limits of ppm_{dv} are the approximate equivalent to the stated grams per brake horsepower hour limit based on assuming the engine is 35 percent efficient.

*** The catalyst must provide a minimum of 80 percent control.

§ 2457. Requirements for Portable Equipment Units

- (a) Emissions from a registered portable equipment unit, exclusive of emissions

emitted directly from the associated portable engine, shall not exceed:

- (1) 10 tons per year of any single criteria pollutant; and
- (2) 82 lbs/day of PM₁₀.

(b) Portable equipment units shall also meet the following applicable requirements:

(1) Confined abrasive blasting operations:

- (A) no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as or darker than Ringlemann 1 or equivalent 20 percent opacity;
- (B) the particulate matter emissions shall be controlled using a fabric or cartridge filter dust collector;
- (C) as a part of application for registration, the applicant shall provide manufacturer's specifications or engineering data to demonstrate a minimum particulate matter control of 99 percent for the dust collection equipment; and
- (D) except for vent filters, each fabric dust collector shall be equipped with an operational pressure differential gauge to measure the pressure drop across the filters.

(2) Concrete batch plants:

- (A) all dry material transfer points shall be ducted through a fabric or cartridge type filter dust collector, unless there are no visible emissions from the transfer point;
- (B) all cement storage silos shall be equipped with fabric or cartridge type vent filters;
- (C) the silo vent filters shall be maintained in proper operating condition;
- (D) no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as or darker than Ringlemann 1 or equivalent 20 percent opacity;
- (E) open areas shall be maintained adequately wet to prevent fugitive emissions in excess of 20 percent opacity or Ringlemann 1;
- (F) silo service hatches shall be dust-tight;
- (G) as a part of application for registration, the applicant shall provide manufacturer's specifications or engineering data to demonstrate a minimum particulate matter control of 99 percent for the dust collection equipment; and
- (H) except for vent filters, each fabric dust collector shall be equipped

with an operational pressure differential gauge to measure the pressure drop across the filters.

- (3) Sand and gravel screening, rock crushing, and pavement crushing and recycling operations:
 - (A) no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as or darker than Ringlemann 1 or equivalent 20 percent opacity;
 - (B) there shall be no visible emissions beyond the property line on which the equipment is being operated;
 - (C) all transfer points shall be ducted through a fabric or cartridge type filter dust collector, or shall be equipped with a wet suppression system maintaining a minimum moisture content of 4 percent by weight;
 - (D) particulate matter emissions from each crusher shall be ducted through a fabric dust collector, or a wet suppression system which maintains a minimum moisture content of 4 percent by weight;
 - (E) all conveyors shall be covered, unless the material being transferred does not result in any visible particulate matter emissions;
 - (F) all stockpiled material shall be maintained at a minimum moisture content of 4 percent by weight, unless the stockpiled material does not result in any visible particulate matter emissions;
 - (G) as a part of application for registration, the applicant shall provide manufacturer's specifications or engineering data to demonstrate a minimum particulate matter control of 99 percent for the dust collection equipment; and
 - (H) except for vent filters, each fabric dust collector shall be equipped with an operational pressure differential gauge to measure the pressure drop across the filters.

- (4) Unconfined abrasive blasting operations:
 - (A) no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as or darker than Ringlemann 2 or equivalent 40 percent opacity;
 - (B) only California Air Resources Board-certified abrasive blasting material shall be used;
 - (C) the abrasive material shall not be reused;
 - (D) no air contaminant shall be released into the atmosphere which causes a public nuisance; and

- (E) all applicable requirements of Title 17 of California Code of Regulations shall also apply.

§ 2458. Recordkeeping and Reporting.

- (a) Any registered portable engine that meets an applicable emissions standard as set forth in Title 13 of the California Code of Regulations or CFR 40 Part 89, is exempt from the requirements of this section.
- (b) Except for a rental business and TSE, the owner of a registered portable engine, including engines otherwise preempted under section 209(e), or portable equipment unit shall maintain daily records for each registered portable engine and equipment unit. The daily records shall be maintained at a central place of business for two years, and made accessible to the Executive Officer or districts upon request. Daily records shall be maintained in a format approved by the Executive Officer and include, at a minimum, all of the following:
 - (1) portable engine or equipment unit registration number;
 - (2) month, day and year;
 - (3) the location(s) at which the portable engine or equipment unit was operated, identified by district, county, or specific location(s);
 - (4) for engines, either total fuel used in gallons per hour or day and an estimate of hours of operation, or actual hours of operation; and
 - (5) for equipment units, the total process weight or throughput.
- (c) The owner of a registered portable engine or equipment unit owned by a rental business and designated for the purpose of renting, shall maintain records for each transaction. The owner shall provide each person who rents the portable engine or equipment unit with a written copy of applicable requirements of this rule, including recordkeeping and notification requirements, as a part of the agreement. The records, including written acknowledgment by each renter of the portable engine or equipment unit of having received the above information, shall be maintained at a central location for two years, and made accessible to the Executive Officer or districts upon request. Records shall be maintained in a format approved by the Executive Officer and include, at a minimum, for each registered portable engine or equipment unit all of the following:
 - (1) portable engine or equipment unit registration number;
 - (2) dates portable engine or equipment unit left and returned to a rental yard;
 - (3) location of operation, identified by district, county, or specific location(s); and
 - (4) hours of operation for each rental period and estimation of hours operated

per day.

- (d) Except for TSE, the owner of a registered portable engine or equipment unit, shall provide the Executive Officer in a format approved by the Executive Officer, within 60 days after the end of each calendar year all of the following information:
 - (1) reporting year;
 - (2) for engines, quarterly summaries for each district or county of total fuel usage in gallons per quarter and an estimate of hours of operation, or total hours of operation per quarter, for each portable engine or equipment unit; and
 - (3) for equipment units, quarterly summaries for each district or county of total process weight or throughput.

- (e) For TSE, each military installation shall provide the Executive Officer in a format approved by the Executive Officer, within 60 days after the end of each calendar year, the number, type, and rating of registered TSE at each installation. Any variation of registered TSE to actual TSE shall be accounted for in this annual report. Any increase of TSE at each military installation during the calendar year shall require the military installation to submit an application for registration for the additional TSE along with any applicable fees to the Executive Officer, within 60 days after the end of each calendar year.

§ 2459. Notification.

- (a) If a registered portable engine or equipment unit will be in a district for more than five days, the owner/operator, or in the case of rental equipment, (except as noted in (c) below), the renter shall notify the district in writing, via facsimile, or by telephone, within two working days of coming into the district. The notification shall include all of the following:
 - (1) the registration number of the portable engine or equipment unit;
 - (2) the name and phone number of a contact person with information concerning the locations where the portable engine or equipment unit will be operated within the district; and
 - (3) estimated time the portable engine or equipment unit will be located in the district.

- (b) If the district has not been notified as required in paragraph (a), because the owner or operator did not expect the duration of operation in the district to trigger the notification requirement, the owner or operator, or in the case of rental equipment, (except as noted in (c) below), the renter shall notify the district within 12 hours of

determining the portable engine or equipment unit will be operating in the district more than five days.

- (c) Owners and operators of registered portable engines rated less than 200 bhp and designated by the Executive Officer for rental use by a rental business are not subject to notification requirements.
- (d) Owners and operators of TSE are not subject to notification requirements.
- (e) Owners and operators of registered portable engines or equipment units moving from one location to another location within the boundaries of the designated “home” district are not subject to notification requirements, providing the home district is identified at the time of registration.

§ 2460. Testing.

- (a) In determining if a portable engine or equipment unit is eligible for registration, the Executive Officer may inspect a portable engine or equipment unit and/or require a source test, at the owners expense, in order to verify information submitted in the application.
- (b) After issuance of registration, the Executive Officer or district may at any time conduct an inspection of any registered portable engine or equipment unit in order to verify compliance with the requirements of this article. However, source testing of engines for compliance purposes shall not be required more frequently than once every three years (including testing at the time of registration), except where evidence of engine tampering, lack of proper engine maintenance, or other problems or operating conditions that could affect engine emissions are identified. In no event shall the Executive Officer or district require source testing of a portable engine for which there is no applicable emission standard, emission limit or other emission related requirement contained in this regulation.
- (c) Testing shall be conducted in accordance with the following methods or other methods approved by the Executive Officer:

Particulate Matter:	ARB Test Method 5
VOC:	ARB Test Method 100 or U.S. EPA Test Method 25A
NOx:	ARB Test Method 100 or U.S. EPA Test Method 7E
Carbon Monoxide:	ARB Test Method 100 or U.S. EPA Test Method 10
Oxygen:	ARB Test Method 100 or U.S. EPA Test Method 3A
Gas Velocity and Flow Rate:	ARB Test Method 1 & 2 or U.S. EPA Test Method 1 & 2

§ 2461. Fees.

- (a) The Executive Officer shall assess and collect reasonable fees for registration, renewal, and associated administrative tasks, to recover the estimated costs to the Executive Officer for evaluating registration applications, and issuing registration documentation.
- (b) Fees shall be due and payable to the Executive Officer at the time an application is filed or as part of any request requiring a fee.
- (c) The owner or operator of a portable engine or equipment unit shall submit fees to the Executive Officer in accordance with Table 3.
- (d) An owner or operator of a registered portable engine or equipment unit may, at time of renewal, change from operational to non-operational status by notifying the Executive Officer in writing and paying the applicable fee of \$45.00.
- (e) An owner or operator of a non-operational portable engine or equipment unit evaluated for registration eligibility at the time of registration shall be assessed a fee of \$60.00 at the time of application. Prior to switching from non-operational to operational status, the owner or operator shall pay a fee of \$30.00.
- (f) An owner or operator of a non-operational portable engine or equipment unit not evaluated for registration eligibility at the time of registration shall be assessed a fee of \$30.00 at the time of application. Prior to switching from non-operational to operational, the owner or operator shall notify the Executive Officer by submitting an application including a fee of \$60.00. The Executive Officer shall verify that the portable engine or equipment unit meets the requirements of this article prior to operation of the portable engine or equipment unit. Misrepresentation of portable engine or equipment unit information and failure to meet the requirements of this article may subject the owner or operator to revocation or suspension of registration and/or penalties under this article.
- (g) A district may collect an enforcement inspection fee of \$75.00, one time per calendar year for each registered portable engine or equipment unit inspected, unless for reasonable cause the district performs an inspection leading to determination of non-compliance with this regulation, or any applicable state or federal requirements. In this instance, the district may charge \$75.00 per portable engine or equipment unit for each inspection necessary for the determination and ultimate resolution of the violation. In no event shall the total fees exceed the actual costs, including staff time, to the district of conducting the investigations and resolving any violations.

- (h) If the registration is valid for more than three years, the renewal fee shall be the sum of the standard renewal fee of \$90.00 and a prorated fee of \$30.00 per year based on the number of years the registration exceeds three years.
- (i) Failure to pay fees when due may result in penalties. If no fee payment is received within 30 days of written notice, fee penalties ranging from \$15.00 to \$45.00 shall be assessed. Failure to pay within 90 days of written notice may result in cancellation of registration. Canceled registration may be reinstated by reapplying for registration and payment of all penalty fees within 90 days of written notice of cancellation. A portable engine or equipment unit without valid registration is subject to the rules and regulations of the district in which it operates.
- (j) The Executive Officer may consolidate renewal fees by prorating the renewal fees of multiple registered portable engines and equipment units.
- (k) Fees shall be periodically revised by the Executive Officer in accordance with the consumer price index, as published by the United States Bureau of Labor Statistics.

Table 3 Registration and Renewal Fees for Statewide Registration Program

(Fees are per registered unit except where noted otherwise)

1	Registration	\$90.00
2	Military tactical support equipment	
a	Registration of first 25 units (or portion thereof)	\$1,500.00
b	Registration of every additional 50 units (or portion thereof)	\$1,500.00
3	Non-operational portable engines or equipment units	
a	Without initial evaluation	\$30.00
b	With initial evaluation	\$60.00
4	Change of status from non-operational to operational	
a	Where initial evaluation has not been previously completed	\$60.00
b	Where initial evaluation has been previously completed	\$30.00
5	Identical replacement	\$15.00
6	Equivalent replacement (treated as a new registration, fees are the same as above for new registration)	
7	Renewal	
a	Every 3 years per registered portable engine or equipment unit	\$90.00
b	Pro-rated yearly per registered portable engine or equipment unit	\$30.00
c	Non-operational 3 years (prorated @ \$10/year) per registered portable engine or equipment unit	\$30.00
d	Change of status from operational to non-operational plus non-operational renewal	\$45.00
8	Renewal for Military tactical support equipment	
a	Renewal of first 25 units (or portion thereof)	\$750.00
b	Renewal of every additional 50 units (or portion thereof)	\$750.00
9	Penalty fee for late payments per registered portable engine or equipment unit	
a	30-60 days after receiving renewal notice	\$15.00
b	60-90 days after receiving renewal notice	\$30.00
c	90 days after receiving renewal notice	\$45.00
10	Modification to registered portable engine or equipment unit	\$15.00
11	Change of ownership per registered portable engine or equipment unit	\$15.00
12	Replacement of registration identification	\$10.00
13	District inspection fee per registered portable engine or equipment unit inspected	\$75.00*

* Where multiple registered portable engines or equipment units are inspected at a given source, the district inspection fee shall be equal to the lesser of the actual cost, including staff time, for conducting the inspection or \$75 per registered portable engine or equipment unit inspected.

§ 2462. Duration of registration.

- (a) For registration applications received within one year after [the effective date of this regulation], the Executive Officer may issue registration valid for more than three years in order to evenly distribute future renewals.
- (b) Except for registrations issued the first year, registrations and renewals will be valid for three consecutive years from date of issuance.
- (c) The Executive Officer shall mail the owner or operator of a registered portable engine or equipment unit a renewal invoice at least 60 days prior to the registration expiration.

§ 2463. Suspension or revocation of registration.

- (a) The Executive Officer for just cause may suspend or revoke registration in any of the following circumstances:
 - (1) the holder of registration has violated one or more terms and conditions of registration or has refused to comply with any of the requirements of this article;
 - (2) the holder of registration has materially misrepresented the meaning, findings, effect or any other material aspect of the registration application, including submitting false or incomplete information in its application for registration regardless of the holder's personal knowledge of the falsity or incompleteness of the information;
 - (3) the test data submitted by the holder of registration to show compliance with this regulation have been found to be inaccurate or invalid;
 - (4) enforcement officers of the ARB or the Districts, after presentation of proper credentials, have been denied access, during normal business hours or hours of operation, to any facility or location where registered portable engines and equipment units are operated or stored and are prevented from inspecting such engines or equipment units as provided for in this article (the duty to provide access applies whether or not the holder of registration owns or controls the facility or location in question);
 - (5) enforcement officers of the ARB or the Districts, after presentation of proper credentials, have been denied access to any records required by this regulation for the purpose of inspection and duplication;
 - (6) the registered portable engine or equipment unit has failed in-use to comply with the findings set forth in the registration. For the purposes of this section, noncompliance with the registration may include, but is not limited to:

- (A) a repeated failure to perform to the standards set forth in this article; or
 - (B) modification of the engine or equipment unit that results in an increase in emissions or changes the efficiency or operating conditions of such engine or equipment unit, without prior notice to and approval by the Executive Officer; or
- (7) the holder of registration has failed to take requested corrective action as set forth in a Notice of Violation or Notice to Comply within the time period set forth in such notice.
- (b) A registration holder may be subject to a suspension or revocation action pursuant to this section based upon the actions of an agent, employee, licensee, or other authorized representative.
 - (c) The Executive Officer shall notify each holder of registration by certified mail of any action taken by the Executive Officer to suspend or revoke any registration granted under this article. The notice shall set forth the reasons for and evidence supporting the action(s) taken. A suspension or revocation is effective upon receipt of the notification.
 - (d) A party having received a notice to revoke or suspend registration may request that the action be stayed pending a hearing under section 2464. In determining whether to grant the stay, the hearing officer shall consider the reasonable likelihood that the registration holder will prevail on the merits of the appeal and the harm the registration holder will likely suffer if the stay is not granted. The Executive Officer shall deny the stay if the adverse effects of the stay on the public health, safety, and welfare outweigh the harm to the registration holder if the stay is not granted.
 - (e) Once a registration has been suspended pursuant to (a) above, the holder of registration must satisfy and correct all noted reasons for the suspension and submit a written report to the Executive Officer advising him or her of all such steps taken by the holder before the Executive Officer will consider reinstating the registration.
 - (f) After the Executive Officer suspends or revokes a registration pursuant to this section and prior to commencement of a hearing under section 2464, if the holder of registration demonstrates to the Executive Officer satisfaction that the decision to suspend or revoke the registration was based on erroneous information, the Executive Officer will reinstate the registration.

- (g) Nothing in this section shall prohibit the Executive Officer from taking any other action provided for by law for violations of the Health and Safety Code.

§ 2464. Appeals.

- (a) Hearing Procedures

- (1) Any applicant for, or a holder of, registration whose application or registration has been denied, suspended, or revoked may request a hearing to review the action taken by sending a request in writing to the Executive Officer. A request for hearing shall include, at a minimum, the following:
 - (A) name of an applicant or registration holder;
 - (B) registration number;
 - (C) copy of the Executive Order revoking or suspending registration or the written notification of denial;
 - (D) a concise statement of the issues to be raised, with supporting facts, setting forth the basis for challenging the denial, suspension, or revocation (mere conclusory allegations will not suffice);
 - (E) a brief summary of evidence in support of the statement of facts required in (D) above; and
 - (F) the signature of an authorized person requesting the hearing.
- (2) A request for a hearing shall be filed within 20 days from the date of issuance of the notice of the denial, suspension, or revocation.
- (3) A hearing requested pursuant to this section shall be heard by a qualified and impartial hearing officer appointed by the Executive Officer. The hearing officer may be an employee of the ARB, but may not be any employee who was involved with the registration at issue. In a request for hearing of a denial of registration, after reviewing the request for hearing and supporting documentation provided under subsection (1) above, the hearing officer shall grant the request for a hearing if he or she finds that the request raises a genuine and substantial question of law or fact.
- (4) Except as provided in (3) above, the hearing officer shall schedule and hold, as soon as practicable, a hearing at a time and place determined by the hearing officer.
- (5) Upon appointment, the hearing officer shall establish a hearing file. The file shall consist of the following:

- (A) the determination issued by the Executive Officer which is the subject of the request for hearing;
 - (B) the request for hearing and the supporting documents that are submitted with it;
 - (C) all documents relating to and relied upon in making the determination to deny registration or to suspend or revoke registration; and
 - (D) correspondence and other documents material to the hearing.
- (6) The hearing file shall be available for inspection by the applicant at the office of the hearing officer.
- (7) An applicant may appear in person or may be represented by counsel or by any other duly authorized representative.
- (8) The ARB may be represented by staff or counsel familiar with the registration program and may present rebuttal evidence.
- (9) Technical rules of evidence shall not apply to the hearing, except that relevant evidence may be admitted and given probative effect only if it is the kind of evidence upon which reasonable persons are accustomed to relying in the conduct of serious affairs. No action shall be overturned based solely on hearsay evidence, unless the hearsay evidence would be admissible in a court of law under a legally recognized exception to the hearsay rule.
- (10) The hearing shall be recorded either electronically or by certified shorthand reporter.
- (11) If a hearing is held, the hearing officer shall render a written decision within 30 working days from the last day of hearing. The hearing officer may do any of the following:
- (A) uphold the denial, suspension, or revocation action as issued;
 - (B) reduce a revocation to a suspension;
 - (C) increase a suspension to a revocation if the registration holder's conduct so warrants; and
 - (D) overturn a denial, suspension, or revocation in its entirety.
- (12) The hearing officer shall consider the totality of the circumstances of the denial, suspension, or revocation, including but not limited to credibility of witnesses, authenticity and reliability of documents, and qualifications of

experts. The hearing officer may also consider relevant past conduct of the applicant including any prior incidents involving other ARB programs.

- (13) The hearing officer's written decision shall set forth findings of fact and conclusions of law as necessary.
- (b) Hearing conducted by written submission.
- (1) In lieu of the hearing procedure set forth in (a), above, an applicant may request that the hearing be conducted solely by written submission.
 - (2) In such case the requestor must submit a written explanation of the basis for the appeal and provide supporting documents within 20 days of making the request. Subsequent to such a submission the following shall transpire:
 - (A) ARB staff shall submit a written response to the requestors submission and documents in support of the Executive Officer's action no later than 10 days after receipt of requestor's submission;
 - (B) The registration holder may submit one rebuttal statement which may include supporting information, as attachment(s), but limited to the issues previously raised;
 - (C) If the registration holder submits a rebuttal, ARB staff may submit one rebuttal statement which may include supporting information, as attachment(s), but limited to the issues previously raised; and
 - (D) the hearing officer shall be designated in the same manner as set forth in (a)(3) above. The hearing officer shall receive all statements and documents and render a written decision. The hearing officer's decision shall be mailed to the requestor no later than 30 working days after the final deadline for submission of papers.

§ 2465. Penalties.

Violation of the provisions of this article may result in a nuisance, civil, and/or criminal violations which may result in imprisonment and/or fines as specified by article 3 and referenced sections of the California Health and Safety Code.

Appendix B:

ASSEMBLY BILL 531 CHAPTERED 10/13/95

Appendix B:

ASSEMBLY BILL 531 CHAPTERED 10/13/95

CHAPTER 817
FILED WITH SECRETARY OF STATE OCTOBER 13, 1995
APPROVED BY GOVERNOR OCTOBER 12, 1995
PASSED THE SENATE SEPTEMBER 15, 1995
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AMENDED IN SENATE SEPTEMBER 6, 1995
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AMENDED IN ASSEMBLY JUNE 19, 1995
AMENDED IN ASSEMBLY JUNE 13, 1995
AMENDED IN ASSEMBLY APRIL 27, 1995
AMENDED IN ASSEMBLY APRIL 6, 1995

INTRODUCED BY Assembly Members Morrissey, Frusetta, and Kevin Murray

FEBRUARY 17, 1995

An act to add Article 1.5 (commencing with Section 41750) to Chapter 3 of Part 4 of Division 26 of the Health and Safety Code, relating to air pollution.

LEGISLATIVE COUNSEL'S DIGEST

AB 531, Morrissey. Air pollution: engines.

(1) Existing law authorizes air pollution control districts and air quality management districts to establish a permit system requiring persons who build, erect, alter, operate, or use any article, machine, equipment, or contrivance which may cause the issuance of air contaminants, to obtain a permit to ensure compliance with applicable air quality standards.

Existing law authorizes the State Air Resources Board to adopt and implement motor vehicle emission standards, in-use performance standards, and motor vehicle fuel specifications for the control of air contaminants and sources of air pollution that the state board has found to be necessary, cost-effective, and technologically feasible to carry out the purposes, unless preempted by federal law. Consistent with that authority, the state board is required to adopt standards and regulations for, among others, off-road and nonvehicle engine categories, including construction equipment and utility

engines.

This bill would require the state board to establish an optional registration program, by regulation, for portable internal combustion engines, as defined. The bill would authorize the state board to assess fees for the registration or the renewal of the registration of those engines. The bill would express the intent of the Legislature that the registration and regulation of emissions from those engines be done on a uniform, statewide basis and that registration and regulation of those engines by the districts be preempted, except as specified. The bill would prohibit districts from taking prescribed actions regarding those engines. The bill would require the state board to establish emission limits and emission control requirements for those engines after conducting an evaluation, holding public hearings, and considering prescribed factors.

The bill would require districts to enforce the registration program, emission limits, or emission control requirements in the same manner as district rules and regulations. Since certain violations of a regulation of the state board would be a misdemeanor, the bill would impose a state-mandated local program by creating a new crime.

(2) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Article 1.5 (commencing with Section 41750) is added to Chapter 3 of Part 4 of Division 26 of the Health and Safety Code, to read:

Article 1.5. Portable Internal Combustion Engines

41750. The Legislature hereby finds and declares all of the following:

- (a) Existing law authorizes each district to impose separate and sometimes inconsistent emission control requirements for, and to require separate permits to operate, portable internal combustion engines that are used at various sites throughout the state.
- (b) That multiplicity of permits and regulatory requirements

imposes a complex and costly burden on California businesses that use, hire, provide, and manufacture those engines.

(c) A uniform, voluntary system of statewide registration and regulation of portable internal combustion engines, consistent with current state and federal air quality law, is necessary to ensure consistent and reasonable regulation of those engines without undue burden on their owners, operators, and manufacturers.

41751. As used in this article, a "portable internal combustion engine" is any internal combustion engine that is portable, meaning that it is carried or moved from one location to another in the normal course of business. Indicia of portability shall include, but are not limited to, wheels, skids, carrying handles, or a dolly, trailer, vessel, platform, or mounting. "Portable internal combustion engine" does not include an engine used to propel nonroad equipment or a motor vehicle of any kind, including, but not limited to, a heavy duty vehicle.

41752. (a) At the earliest feasible date, but not later than January 1, 1997, the state board shall do all of the following:

(1) Evaluate the emissions from the operation of portable internal combustion engines and identify emission reduction technologies that may be applied to those engines.

(2) After holding at least one public hearing, establish, by regulation, emission limits and emission control requirements, consistent with Section 41754, and an optional registration program for portable internal combustion engines that are, or may be, used in more than a single district.

(b) The registration program shall take effect on the date specified by the state board in the regulation, but not later than 180 days from the date that the state board adopts the regulation.

(c) The program shall provide for the voluntary registration of each portable internal combustion engine, and may provide for the renewal of a registration not more than once every three years.

(d) (1) The state board may establish a schedule of fees for purposes of this article to be assessed on persons seeking to register, or to renew the registration of, portable internal combustion engines. The state board may establish separate fees for the initial registration and for the renewal of a registration. The fees charged, in the aggregate, shall not exceed the reasonable cost to the state board of administering the registration program, and adopting the regulations specified in Section 41754.

(2) The state board shall, in adopting the regulations specified in Section 41754, include a uniform statewide district fee schedule for the recovery of the reasonable costs of enforcement pursuant to

Section 41755.

(e) Notwithstanding Section 41754, the state board may periodically revise and update the regulations adopted pursuant to this section, including, but not limited to, revising and updating a determination of best available control technology (BACT) for portable internal combustion engines.

41753. (a) (1) It is the intent of the Legislature that the registration of, and the regulation of emissions from, portable internal combustion engines that are operated in more than one district and that are subject to the registration program be done on a uniform, statewide basis by the state board and that the permitting, registration, and regulation of those engines by the districts be preempted.

(2) Notwithstanding paragraph (1), if the owner or operator of a portable internal combustion engine elects not to register under the statewide registration program, the unregistered engine shall be subject to district permitting requirements pursuant to district regulations.

(b) On and after the effective date of the statewide registration program established by the state board pursuant to subdivision (a) of Section 41752 and upon the registration of a portable internal combustion engine by the engine owner or operator, a district shall not, with respect to the affected portable internal combustion engine, do any of the following:

(1) Require a permit for the construction or operation of the engine.

(2) Assess any fee related to the construction or operation of the engine, other than that specified in paragraph (2) of subdivision (d) of Section 41752.

(3) Adopt any emission limit or emission control requirement applicable to the engine.

(4) Except as provided in Section 41755, enforce any emission limit or emission control requirement applicable to the engine.

41754. (a) The regulations adopted by the state board, on or before January 1, 1997, shall include, but not be limited to, provisions that ensure all of the following:

(1) That emissions from portable internal combustion engines subject to the statewide registration program do not, in any manner, cause a violation of state or federal ambient air quality standards.

(2) That, to the extent not in conflict with federal law, the registration program preserves the most stringent requirements adopted by a district which require the use of best available control technology (BACT) for each class or category of portable internal

combustion engines which were in effect on January 1, 1995.

(3) That the statewide registration program is consistent with the state implementation plan, and any amendments to that plan, required to be submitted pursuant to the federal Clean Air Act (42 U.S.C.A. Sec. 7401 et seq.).

(4) That any registered portable internal combustion engine, including any turbine, used by the Department of Defense or the National Guard exclusively for military tactical support or other federal emergency purposes, as specified in the state board's regulation, is not subject to any statewide or district emission control or emission limit.

(b) No emission limit or emission control requirement shall be established for any engine or class of engines unless the state board determines that the emission limit or emission control requirement is technologically and economically feasible for those engines or that class of engines, and is necessary to carry out the express terms of this division, including, but not limited to, Section 43013, or to comply with state or federal ambient air quality standards.

(c) Prior to adopting any emission limit or emission control requirement, the state board shall consider the magnitude of the resultant air quality benefits and the potential effects of the regulation on the costs to businesses that use the engines.

(d) The emission limits established for any engine or class of engines shall reflect the effectiveness of all control equipment installed and operated on the engine or particular class of engine.

(e) No emission limits other than those established by the state board for any engine or class of engines shall be used by a district for purposes of calculating and reporting emissions from engines subject to this article.

41755. districts shall enforce the statewide registration program, emission limitations, and emission control requirements established by the state board pursuant to this article in the same manner as a district rule or regulation.

SEC. 2. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the only costs which may be incurred by a local agency or school district will be incurred because this act creates a new crime or infraction, changes the definition of a crime or infraction, changes the penalty for a crime or infraction, or eliminates a crime or infraction. Notwithstanding Section 17580 of the Government Code, unless otherwise specified in this act, the provisions of this act shall become operative on the same date that the act takes effect pursuant to the California Constitution.

Appendix C:

ASSEMBLY BILL 2635 CHAPTERED 09/12/96

Appendix C:

ASSEMBLY BILL 2635 CHAPTERED 09/12/96

CHAPTER 429
FILED WITH SECRETARY OF STATE SEPTEMBER 12, 1996
APPROVED BY GOVERNOR SEPTEMBER 11, 1996
PASSED THE ASSEMBLY AUGUST 22, 1996
PASSED THE SENATE AUGUST 8, 1996
AMENDED IN SENATE AUGUST 5, 1996
AMENDED IN SENATE JULY 10, 1996
AMENDED IN SENATE JUNE 6, 1996
AMENDED IN ASSEMBLY MARCH 28, 1996

INTRODUCED BY Assembly Member Morrissey

FEBRUARY 21, 1996

An act to amend Sections 41750, 41751, 41752, 41753, 41754, and 41755 of, and to amend the heading of Article 1.5 (commencing with Section 41750) of Chapter 3 of Part 4 of Division 26 of, the Health and Safety Code, relating to air pollution.

LEGISLATIVE COUNSEL'S DIGEST

AB 2635, Morrissey. Air pollution: portable internal combustion engines: registration program: recordkeeping and reporting.

Existing law authorizes air pollution control districts and air quality management districts to establish a permit system requiring persons who build, erect, alter, operate, or use any article, machine, equipment, or contrivance that may cause the issuance of air contaminants to obtain a permit to ensure compliance with applicable air quality standards.

Existing law requires the State Air Resources Board to establish an optional registration program, by regulation, for portable internal combustion engines, as defined, and requires that the regulations adopted by the state board, on or before January 1, 1997, include specified provisions.

This bill would revise that program and those specified regulatory provisions to apply to portable equipment, as defined, and to delay the date by which the inclusion of those provisions is required until July 1, 1997. The bill would require any recordkeeping and reporting requirements prescribed by the state board for the purpose of tracking engine utilization and movement to be the minimum that is necessary to provide sufficient emission inventory data and allow

adequate enforcement of the registration program. The bill would make technical and clarifying changes in those provisions.

The bill would require the state board to include the registration program in the state implementation plan.

The bill would prohibit source testing of engine emissions under prescribed conditions.

The bill would make related legislative findings and declarations.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. The heading of Article 1.5 (commencing with Section 41750) of Chapter 3 of Part 4 of Division 26 of the Health and Safety Code is amended to read:

Article 1.5. Portable Equipment

SEC. 2. Section 41750 of the Health and Safety Code is amended to read:

41750. The Legislature hereby finds and declares all of the following:

(a) Existing law authorizes each district to impose separate and sometimes inconsistent emission control requirements for, and to require separate permits to operate, portable equipment that are used at various sites throughout the state.

(b) That multiplicity of permits and regulatory requirements imposes a complex and costly burden on California businesses that use, hire, provide, and manufacture that equipment.

(c) A uniform, voluntary system of statewide registration and regulation of portable equipment, consistent with current state and federal air quality law, is necessary to ensure consistent and reasonable regulation of that equipment without undue burden on their owners, operators, and manufacturers.

(d) Portable equipment has attributes of both mobile sources and stationary sources of air pollution. A separate registration and emission control program is needed to reflect the unique operating characteristics of that equipment while providing authority for a statewide program of emission reduction measures to be applied to existing in-state, out-of-state, and newly manufactured portable equipment.

SEC. 3. Section 41751 of the Health and Safety Code is amended to read:

41751. (a) As used in this article, "portable equipment" includes any internal combustion engine that is portable, and equipment that

is associated with, and driven solely by, any portable internal combustion engine. Portable equipment does not include an engine used to propel nonroad equipment or a motor vehicle of any kind, including, but not limited to, a heavy-duty vehicle.

(b) As used in this article, "portable" means that it is carried or moved from one location to another in the normal course of business. Indicia of portability include, but are not limited to, wheels, skids, carrying handles, or a dolly, trailer, vessel, platform, or mounting.

(c) Portable equipment includes, but is not limited to, any of the following:

- (1) Confined and unconfined abrasive blasting equipment.
- (2) Portland concrete batch plants.
- (3) Sand and gravel screening, rock crushing, unheated pavement crushing, and recycling operations equipment.
- (4) Consistent with federal law, portable internal combustion engines used in conjunction with, but not limited to, the following types of operations:
 - (A) Well drilling, including service equipment and work over rigs.
 - (B) Power generation, excluding cogeneration.
 - (C) Pumps.
 - (D) Compressors.
 - (E) Pile drivers.
 - (F) Welding.
 - (G) Cranes.
 - (H) Wood chippers.
- (5) Equipment necessary for the operation of portable equipment.

SEC. 4. Section 41752 of the Health and Safety Code is amended to read:

41752. (a) At the earliest feasible date, but not later than July 1, 1997, the state board shall do all of the following:

(1) Evaluate the emissions from the operation of portable equipment and identify emission reduction technologies that may be applied to portable equipment.

(2) After holding at least one public hearing, establish, by regulation, emission limits and emission control requirements, consistent with Section 41754, and an optional registration program for portable equipment that is, or may be, used in more than a single district.

(b) The registration program shall take effect on the date specified by the state board in the regulation, but not later than 180 days from the date that the state board adopts the regulation.

(c) The program shall provide for the voluntary registration of

portable equipment, and may provide for the renewal of a registration not more than once every three years.

(d) (1) The state board may establish a schedule of fees for purposes of this article to be assessed on persons seeking to register, or to renew the registration of, portable equipment. The state board may establish separate fees for the initial registration and for the renewal of a registration. The fees charged, in the aggregate, shall not exceed the reasonable cost to the state board of administering the registration program, and adopting the regulations specified in Section 41754.

(2) The state board shall, in adopting the regulations specified in Section 41754, include a uniform statewide district fee schedule for the recovery of the reasonable costs of enforcement pursuant to Section 41755.

(e) Notwithstanding Section 41754, the state board may periodically revise and update the regulations adopted pursuant to this section, including, but not limited to, revising and updating a determination of best available control technology (BACT) for portable internal combustion engines.

SEC. 5. Section 41753 of the Health and Safety Code is amended to read:

41753. (a) (1) It is the intent of the Legislature that the registration of, and the regulation of emissions from, portable equipment that is operated in more than one district and that is subject to the registration program be done on a uniform, statewide basis by the state board and that the permitting, registration, and regulation of portable equipment by the districts be preempted.

(2) Notwithstanding paragraph (1), if the owner or operator of portable equipment elects not to register under the statewide registration program, the unregistered portable equipment shall be subject to district permitting requirements pursuant to district regulations.

(b) On and after the effective date of the statewide registration program established by the state board pursuant to subdivision (a) of Section 41752 and upon the registration of portable equipment by the portable equipment owner or operator, a district shall not, with respect to the affected portable equipment, do any of the following:

(1) Require a permit for the construction or operation of the portable equipment.

(2) Assess any fee related to the construction or operation of the portable equipment, other than that specified in paragraph (2) of subdivision (d) of Section 41752.

(3) Adopt any emission limit or emission control requirement

applicable to the portable equipment.

(4) Except as provided in Section 41755, enforce any emission limit or emission control requirement applicable to the portable equipment.

(c) The state board, in consultation with affected districts, shall amend the state implementation plan as necessary to include the statewide registration program and conform the state implementation plan to its requirements.

SEC. 6. Section 41754 of the Health and Safety Code is amended to read:

41754. (a) The regulations adopted by the state board, on or before July 1, 1997, shall include, but need not be limited to, provisions that ensure all of the following:

(1) That emissions from portable equipment subject to the statewide registration program will not, in the aggregate, interfere with the attainment or maintenance of state or federal ambient air quality standards and the emissions from any one portable equipment engine, exclusive of background concentration, shall not cause an exceedance of any ambient air quality standard. This paragraph shall not be construed as requiring portable equipment operators to provide emission offsets for portable equipment registered under the program.

(2) (A) That, to the extent not in conflict with federal law, the registration program preserves the most stringent requirements adopted by a district which require the use of best available control technology (BACT) for each class or category of portable equipment determined appropriate by the state board, and which requirements were in effect on January 1, 1995. In determining the appropriate emission limits or emission control technology requirements for classes and categories of portable equipment, the state board may set different requirements for portable equipment that is defined by the state board as California resident portable equipment.

(B) Notwithstanding subparagraph (A) and, to the extent not in conflict with federal law, the state board may consider technical and economic feasibility in establishing emission limits or control equipment requirements for any category or class of existing California resident portable equipment, if all portable equipment in that category or class is required to be modified or replaced to meet BACT or the more stringent of a state or federal emission standard, at a date determined by the state board.

(3) That any registered portable equipment, including any turbine, used by the Department of Defense or the National Guard exclusively for military technical support or other federal emergency purposes,

as specified in the regulations adopted by the state board, is not subject to any statewide or district emission control or emission limit.

(b) No emission limit or emission control requirement shall be established for any portable equipment defined by the state board as California resident portable equipment unless the state board determines that the emission limit or emission control requirement is technologically and economically feasible and is necessary to carry out the express terms of this division, including, but not limited to, Section 43013, or to attain or maintain state or federal ambient air quality standards.

(c) Prior to adopting any emission limit or emission control requirement, the state board shall consider the magnitude of the resultant air quality benefits and the potential effects of the regulation on the costs to businesses that use the portable equipment.

(d) The emission limits established for any portable equipment or class of portable equipment shall reflect the effectiveness of all control equipment installed and operated on the portable equipment or particular class of portable equipment.

(e) No emission limits other than those established by the state board for any portable equipment or class of portable equipment shall be used by a district for purposes of calculating and reporting emissions from portable equipment subject to this article.

(f) Any recordkeeping and reporting requirements prescribed by the state board for the purpose of tracking portable equipment utilization and movement shall be the minimum that is necessary to provide sufficient emission inventory data and allow adequate enforcement of the registration program.

(g) Source testing of portable equipment emissions for registration purposes shall not be required if there is no emission standard applicable to portable equipment, or if acceptable emissions data is available. For purposes of this subdivision, "acceptable emissions data" means emissions data representative of current portable equipment operations that is either reliable emissions data from the portable equipment manufacturer or a source test performed within three years prior to the date that the emissions data is requested.

SEC. 7. Section 41755 of the Health and Safety Code is amended to read:

41755. (a) districts shall enforce the statewide registration program, emission limitations, and emission control requirements established by the state board pursuant to this article in the same

manner as a district rule or regulation.

(b) (1) Source testing of engines for compliance purposes shall not be required more frequently than once every three years, except where evidence of engine tampering, lack of proper engine maintenance, or other problems or operating conditions that could affect emissions from the engine are identified.

(2) A district may conduct source testing to determine compliance with mass emission limits where there is an indication of noncompliance.

(3) Except as required for purposes of paragraph (2), source testing of engine emissions for compliance purposes shall not be required of engines for which there is no applicable emission limit.

Appendix D:

SENATE BILL 1880 CHAPTERED 09/27/96

Appendix D:

SENATE BILL 1880 CHAPTERED 09/27/96

CHAPTER 998
FILED WITH SECRETARY OF STATE SEPTEMBER 27, 1996
APPROVED BY GOVERNOR SEPTEMBER 27, 1996
PASSED THE SENATE AUGUST 29, 1996
PASSED THE ASSEMBLY AUGUST 28, 1996
AMENDED IN ASSEMBLY AUGUST 21, 1996
AMENDED IN SENATE APRIL 18, 1996

INTRODUCED BY Senator Lewis

FEBRUARY 22, 1996

An act to amend Section 41751 of the Health and Safety Code, relating to air pollution.

LEGISLATIVE COUNSEL'S DIGEST

SB 1880, Lewis. Air pollution: portable internal combustion engines.

(1) Existing law requires the State Air Resources Board to establish emission limits, emission control requirements, and an optional registration program for portable internal combustion engines, as defined. Existing law requires air pollution control districts and air quality management districts to enforce those provisions.

This bill would revise the definition of "portable internal combustion engine," as specified, and would define the term "portable equipment." The bill would create a state-mandated local program by imposing new duties on the districts.

(2) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

This bill would provide that no reimbursement is required by this act for a specified reason.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 41751 of the Health and Safety Code is amended to read:

41751. (a) (1) As used in this article, "portable equipment"

includes any portable internal combustion engine and equipment that is associated with, and driven by, any portable internal combustion engine.

(2) (A) As used in this article, and except as provided in subdivision (b), a "portable internal combustion engine" is any internal combustion engine which is, by itself, or contained within or attached to a piece of equipment, is portable or transportable.

(B) As used in this paragraph, "portable or transportable" means designed to be, and capable of being, carried or moved from one location to another. Indicia of portability or transportability include, but are not limited to, wheels, skids, carrying handles, or a dolly, trailer, or platform.

(b) Any engine otherwise included in this section is not a portable internal combustion engine if either of the following applies:

(1) The engine remains, or will remain, at a fixed location for more than 12 consecutive months. For purposes of this paragraph, a "fixed location" is any single site at a building, structure, facility, or installation.

(2) The engine is used to propel nonroad equipment or a motor vehicle of any kind, including, but not limited to, a heavy-duty vehicle.

(c) Portable equipment includes, but is not limited to, any of the following:

(1) Confined and unconfined abrasive blasting equipment.

(2) Portland concrete batch plants.

(3) Sand and gravel screening, rock crushing, unheated pavement crushing, and recycling operations equipment.

(4) Consistent with federal law, portable internal combustion engines used in conjunction with, but not limited to, the following types of operations:

(A) Well drilling, including service equipment and work over rigs.

(B) Power generation, excluding cogeneration.

(C) Pumps.

(D) Compressors.

(E) Pile drivers.

(F) Welding.

(G) Cranes.

(H) Wood chippers.

(5) Equipment necessary for the operation of portable equipment.

SEC. 2. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because a local agency or school district has the authority to levy service charges, fees,

or assessments sufficient to pay for the program or level of service mandated by this act, within the meaning of Section 17556 of the Government Code.

Notwithstanding Section 17580 of the Government Code, unless otherwise specified, the provisions of this act shall become operative on the same date that the act takes effect pursuant to the California Constitution.

Appendix E:
U.S. EPA LETTER

Appendix F:
MODELING RESULTS FOR PORTABLE ENGINES

Appendix G:

EMISSION IMPACTS OF STATEWIDE REGISTRATION PROGRAM

Appendix G:

EMISSION IMPACTS OF STATEWIDE REGISTRATION PROGRAM

Introduction

Air Resources Board (ARB) staff used the following methodology to estimate statewide emissions from portable internal combustion engines (ICE). The methodology determines emissions of oxides of nitrogen (NO_x) and particulate matter (PM₁₀) from internal combustion engines (ICE) eligible to register in the Statewide Registration Program. Emission impacts from the registration of portable equipment units is not included because ARB staff does not expect any difference in emissions between the Statewide Registration Program and district programs for portable equipment units.

A. PERCENTAGE OF THE ICE POPULATION THAT IS PORTABLE

The ARB emission inventory data does not specifically distinguish portable from stationary and mobile ICE. Therefore in order to determine the emissions impact of the Statewide Registration Program, the percent of the total ICE emissions that are attributed to portable engines must be determined. Based on information from the *Off-Road Mobile Equipment Emissions Inventory Estimate Draft Report*, [Booz, Allen & Hamilton Incorporated (BAH), January 1992] draft report and the South Coast Air Quality Management district (SCAQMD) staff report accompanying Rule 2100, the characteristics of the ICE population are estimated as follows:

- 70 % of engines rated between 40 and 100 horsepower (bhp) are portable
- 20 % of engines rated between 100 and 175 bhp are portable
- 15 % of engines rated between 175 and 300 bhp are portable
- 10 % of engines rated between 300 and 500 bhp are portable
- Average horsepower of engines rated between 50 and 103 bhp is 77 bhp
- Average horsepower of engines rated between 103 and 234 bhp is 158 bhp
- Average horsepower of engines rated greater than 234 bhp is 398 bhp

To calculate a representative distribution, assumptions were made based on the BAH report, the SCAQMD staff report accompanying Rule 2100, and confidential information provided by workgroup members representing interested industry. The following assumptions were made:

- Gram per brake-horsepower-hour (g/bhp-hr) emission rates are constant from all engines in each bhp range for each pollutant
- Population average bhp of both stationary and portable engines within a given horsepower range are equivalent
- 10 % of engines rated greater than 234 bhp are portable
- Population average horsepower of 25-50 range is 37.5 bhp
- 70 % of engines rated between 50 and 100 bhp are portable
- 20 % of engines rated between 100 and 234 bhp are portable
- Load factors and hours of operation are constant for all bhp ranges

To calculate the percentage of portable engines from the ICE population, ARB staff divided the entire population into four horsepower ranges. For each horsepower range category, the average horsepower for the range was multiplied by the percent portable to calculate a “factor” for the range. The sum of the factors compared to the population as a whole provided the percentage of portable ICE.

Table 1: Determination of Percentage of Portable and Stationary ICE

Horse-power Range	Average Horse-power	Portable			Stationary		
		Percent	(%)(bhp)	Factor	Percent	(%)(bhp)	Factor
25-50	37.5 bhp	N/A ¹	(0)(37.5)	0	100	(1)(37.5)	38
50-100	77 bhp	70	(.7)(77)	54	30	(.3)(77)	23
100 - 234	158 bhp	20	(.2)(158)	32	80	(.8)(158)	126
234+	398 bhp	10	(.1)(398)	40	90	(.9)(398)	358
				Portable Factor Total	126		
				Factor Total	671		
				Portable Emission Percent	20		
						Stationary Factor Total	545
						Factor Total	671
						Stationary Emission Percent	80

1. Engines less than 50 bhp not affected by statewide registration program.

As Table 1 demonstrates, ARB staff estimates that approximately 20% of the total internal combustion engine emissions can be attributed to engines eligible to register in the statewide registration program.

B. ESTIMATING EMISSIONS REDUCTIONS ATTRIBUTED TO STATEWIDE REGISTRATION PROGRAM

In order to determine the emissions impact of the Statewide Registration Program, ARB staff obtained copies of existing and projected emission inventories for each air basin within the State for the years 1996, 1999, 2002, 2005, and 2010. Technical Support Division staff within the ARB isolated specific source categories, both stationary and off-road, where portable engine emissions were likely to be included. Two emission inventory runs were generated and 20 percent of the totals were taken to represent the emissions from portable engines. The first run included existing and projected emissions including existing district control measures and proposed control measures contained in the SIP. This run represented the effectiveness of district programs in reducing emissions from portable engines. The second run was performed without existing and proposed district programs and represented the existing inventory with emissions growth only. To determine the effectiveness of the Statewide Registration Program, the second run was adjusted for the estimated effectiveness of requirements contained in the proposed Regulation. It was assumed that the requirements of the Statewide Registration Program will lower emissions from compression-ignition engines to 6.9 (g/bhp-hr) statewide by 2010. This reduction was estimated by ARB staff to equate to a 40 percent control of emissions compared to current 1996 emission inventory. To estimate emissions in interim years staff applied a non-linear growth in the control percentage which paralleled the control requirement dates in the proposed Regulation. Ultimately, it is anticipated that the largest reduction takes place just prior to the most stringent requirements that take effect in 2010.

In comparing district programs with the Statewide Registration Program, overall statewide emissions will be substantially reduced by the year 2010 for portable engines registered under the Statewide Registration Program. Beginning as soon as the year 2005 overall emissions statewide are less under the Statewide Registration Program compared to district programs. In the years prior to 2005 the Statewide Registration Program may potentially result in an increase in emissions statewide. This is because the ARB staff analysis shows a potential increase in emissions of as much as four tons per day of NO_x in the SCAQMD up until the year 2005. With the exception of the SCAQMD, emissions are estimated to be the same or less in the remaining air basins under the Statewide Registration Program. The reason for the potential short fall in emissions in the SCAQMD is because of SCAQMD Rule 1110.2, Emissions from Gaseous and Liquid Fueled Internal Combustion Engines.

South Coast Air Quality Management District Rule 1110.2 applies to all internal combustion engines, including portable engines, and requires electrification or compliance with stringent emission limitations by December 31, 1999. Because of the timing in the application of control or emission limitation requirements, the Statewide Registration Program may result in an increase of as much as four tons of NO_x per day up until the year 2005. After the year 2005, the Statewide Registration Program catches up to the SCAQMD program and by the year 2010 exceeds the emission reduction commitments proposed by SCAQMD. However, the staff analysis does not take into consideration the impact of the federal nonroad engine preemption on the SCAQMD program. Because the preemption prevents the SCAQMD from applying Rule 1110.2 to any nonroad engine, the emission reductions projected by the SCAQMD will be

reduced, resulting in a smaller discrepancy between the Statewide Registration Program and the SCAQMD permitting program. Staff has been unable to quantify the impact of the preemption because information could not be found to determine the universe of nonroad engines operating in the SCAQMD. In all likelihood, the Statewide Registration Program will result in emission increases of NO_x much less than the four tons per day estimated by staff.

Further, because of the distinct advantages of registering under the Statewide Registration Program (e.g., uniform statewide requirements, freedom to operate throughout the State, lower fees) and the incentives provided in the proposed Regulation (e.g., no daily or annual emission limits, no recordkeeping and reporting requirements) to encourage the use of lower emitting technologies, ARB staff believe that the emissions benefits resulting from the Statewide Registration Program will be greatly accelerated. This will result not only in closing any gap in emissions benefits between the SCAQMD and the Statewide Registration Program, but is expected to result in even larger emission reductions in the remaining air basins as well.

Appendix H:
CALIFORNIA AIR POLLUTION CONTROL DISTRICTS

Appendix H:

CALIFORNIA AIR POLLUTION CONTROL DISTRICTS

APCD / AQMD	ADDRESS	PHONE / FAX
AMADOR COUNTY APCD	500 Argonaut Lane Jackson, CA 95642-2310	Phone: (209) 223-6406 Fax: (209) 223-6260
BAY AREA AQMD	939 Ellis Street San Francisco, CA 94109	Phone: (415) 771-6000 Fax: (415) 928-8560
BUTTE COUNTY AQMD	2525 Dominic Drive, Suite J Chico, CA 95928	Phone: (916) 891-2882 Fax: (916) 891-2878
CALAVERAS COUNTY APCD	Government Center 891 Mountain Ranch Road San Andreas, CA 95249	Phone: (209) 754-6504 Fax: (209) 754-6521
COLUSA COUNTY APCD	100 Sunrise Boulevard #F Colusa, CA 95932	Phone: (916) 458-0590 Fax: (916) 458-5000
EL DORADO COUNTY APCD	2850 Fairlane Court, Building C Placerville, CA 95667	Phone: (916) 621-6662 Fax: (916) 626-7130
FEATHER RIVER AQMD	938 14th Street Marysville, CA 95901	Phone: (916) 634-7659 Fax: (916) 634-7660
GLENN COUNTY APCD	P.O. Box 351 (720 N. Colusa St.) Willows, CA 95988	Phone: (916) 934-6500 Fax: (916) 934-6503
GREAT BASIN UNIFIED APCD	157 Short Street, Suite 6 Bishop, CA 93514	Phone: (619) 872-8211 Fax: (619) 872-6109
IMPERIAL COUNTY APCD	150 South 9th Street El Centro, CA 92243-2801	Phone: (619) 339-4314 Fax: (619) 353-9420
KERN COUNTY APCD	2700 "M" Street, Suite 290 Bakersfield, CA 93301	Phone: (805) 862-5250 Fax: (805) 862-5251
LAKE COUNTY AQMD	883 Lakeport Boulevard Lakeport, CA 95453	Phone: (707) 263-7000 Fax: (707) 263-0421
LASSEN COUNTY APCD	175 Russell Avenue Susanville, CA 96130	Phone: (916) 251-8110 Fax: (916) 257-6515
MARIPOSA COUNTY APCD	P.O. Box 2039 (5101 Jones St.) Mariposa, CA 95338	Phone: (209) 966-5151 Fax: (209) 742-5024
MENDOCINO COUNTY AQMD	306 East Gobbi Street Ukiah, CA 95482	Phone: (707) 463-4354 Fax: (707) 463-5707

APCD / AQMD	ADDRESS	PHONE / FAX
MODOC COUNTY APCD	202 West 4th Street Alturas, CA 96101	Phone: (916) 233-6419 Fax: (916) 233-5542
MOJAVE DESERT AQMD	15428 Civic Drive, Suite 200 Victorville, CA 92392	Phone: (619) 245-1661 Fax: (619) 245-2699
MONTEREY BAY UNIFIED APCD	24580 Silver Cloud Court Monterey, CA 93940	Phone: (408) 647-9411 Fax: (408) 647-8501
NORTH COAST UNIFIED AQMD	2389 Myrtle Avenue Eureka, CA 95501	Phone: (707) 443-3093 Fax: (707) 443-3099
NORTHERN SIERRA AQMD	P.O. Box 2509 200 Litton Dr., Suite 320 Grass Valley, CA 95945	Phone: (916) 274-9360 Fax: (916) 274-7546
NORTHERN SONOMA COUNTY APCD	109 North Street Healdsburg, CA 95448	Phone: (707) 433-5911 Fax: (707) 433-4823
PLACER COUNTY APCD	DeWitt Center 11464 "B" Avenue Auburn, CA 95603	Phone: (916) 889-7130 Fax: (916) 889-7107
SACRAMENTO METRO AQMD	8411 Jackson Road Sacramento, CA 95826	Phone: (916) 386-6183 Fax: (916) 386-6650
SAN DIEGO COUNTY APCD	9150 Chesapeake Drive San Diego, CA 92123-1096	Phone: (619) 694-3300 Fax: (619) 694-2730
SAN JOAQUIN VALLEY UNIFIED APCD	Fresno Office 1999 Tuolumne, Suite 200 Fresno, CA 93721-1638 Bakersfield Office 2700 M Street, Suite 275 Bakersfield, CA 93301-2370 Modesto Office 4230 Kiernan Avenue, Suite 130 Modesto, CA 95356-9321	Phone: (209) 497-1000 Fax: (209) 233-2057 Phone: (805) 862-5200 Fax: (805) 861-2060 Phone: (209) 545-7000 Fax: (209) 545-8652
SAN LUIS OBISPO COUNTY APCD	2156 Sierra Way, Suite B San Luis Obispo, CA 93401	Phone: (805) 781-5912 Fax: (805) 781-1035
SANTA BARBARA COUNTY APCD	26 Castilian Drive, Suite B-23 Goleta, CA 93117	Phone: (805) 961-8800 Fax: (805) 961-8801
SHASTA COUNTY AQMD	1640 West Street Redding, CA 96001	Phone: (916) 225-5674 Fax: (916) 225-5237
SISKIYOU COUNTY APCD	525 South Foothill Drive Yreka, CA 96097	Phone: (916) 842-8029 Fax: (916) 842-6690

APCD / AQMD	ADDRESS	PHONE / FAX
SOUTH COAST AQMD	21865 East Copley Drive Diamond Bar, CA 91765	Phone: (909) 396-2000 Fax: (909) 396-3340
TEHAMA COUNTY APCD	P.O. Box 38 (1750 Walnut St.) Red Bluff, CA 96080	Phone: (916) 527-3717 Fax: (916) 527-0959
TUOLUMNE COUNTY APCD	2 South Green Street Sonora, CA 95370	Phone: (209) 533-5693 Fax: (209) 533-5520
VENTURA COUNTY APCD	669 County Square Drive, 2nd Fl. Ventura, CA 93003	Phone: (805) 645-1440 Fax: (805) 645-1444
YOLO/SOLANO AQMD	1947 Galileo Court, Suite 103 Davis, CA 95616	Phone: (916) 757-3650 Fax: (916) 757-3670

Appendix I
REFERENCES

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