

**State of California  
AIR RESOURCES BOARD**

**INITIAL STATEMENT OF REASONS  
FOR RULEMAKING  
PROPOSED AMENDMENTS TO THE REGULATION  
FOR THE STATEWIDE PORTABLE  
EQUIPMENT REGISTRATION PROGRAM**

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## **CHAPTER I: EXECUTIVE SUMMARY**

## I.

### INTRODUCTION

This executive summary outlines the Air Resources Board staff's (staff) proposal to amend the Statewide Portable Equipment Registration Program Regulation (Regulation) as adopted by the Air Resources Board (Board) on March 27, 1997 for portable engines and equipment units.

The report comprises the Initial Statement of Reasons for Proposed Amendments to the Statewide Portable Equipment Registration Program Regulation as required by the Administrative Procedure Act (Government Code 11340 et seq.). Chapter I provides an overview of the proposed amendments to the Regulation, a summary of staff recommendations, and a brief discussion of the environmental and economic impacts resulting from the proposal. Chapter II is a more detailed presentation of the technical aspects of the proposed amendments to the Regulation.

#### A. BACKGROUND

The Regulation<sup>1</sup> was adopted by the Board with modifications on March 27, 1997 and subsequently became effective on September 17, 1997. Upon adoption of the Regulation, the Board directed staff, in consultation with local air pollution control and air quality management districts (districts), affected industry, and the United States Environmental Protection Agency (U.S. EPA), to evaluate the applicability of the Statewide Registration Program to portable engines operated in California coastal waters and to address any implementation issues. The Board instructed staff to report back within one year of implementation of the Regulation with any recommended amendments.

As of October 1998, the ARB has received 640 registration applications representing approximately 10,000 portable engines and equipment units. Of these numbers, staff has approved 431 applications and issued registration certificates for about 3,400 portable engines and equipment units and 4,900 pieces of military tactical support equipment (TSE). For the remaining portable engines and equipment units, either the applicant has withdrawn the portable engine or equipment unit for consideration of Statewide registration or staff is currently evaluating the applications for Statewide registration. The average processing time for an application has been about 64 days. Currently, staff is engaged in outreach with districts throughout the State on implementation, inspection, and enforcement aspects of the Statewide Registration Program. In addition, staff has developed, in consultation with local districts, a compliance website to allow district inspectors access to registration data and to share inspection

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<sup>1</sup> When used in this Executive Summary, Regulation refers to the regulation adopted by the Board on March 27, 1997.

results with other districts.

During the first year of implementation of the Statewide Registration Program, staff worked in conjunction with industry representatives, districts, and the U.S. EPA to follow-up on the Board's direction.

## **B. PUBLIC PROCESS**

### **1. Workgroup**

In developing the proposed amendments to the Regulation, staff has been faced with balancing the requirements of State law with industry, district, and federal concerns. The overall goal has been to address legitimate implementation issues while ensuring that any proposed changes would not jeopardize commitments contained in the State Implementation Plan (SIP).

Staff, in February 1998, reconvened the Portable Equipment Registration Workgroup (Workgroup) to assist in developing the regulatory amendments needed to address issues identified during the implementation of the Regulation. The Workgroup consisted of local, State, and federal air quality agencies and representatives of affected industries such as oil services, well drilling, construction, sanitation, movie, rental, and manufacturing. The Workgroup met periodically during the period from February 1998 to May 1998. During this time, issues were identified and addressed by the Workgroup. The following issues were addressed by the Workgroup for incorporation into the proposed amendments to the Regulation:

- Modify emission limits and/or technology requirements for resident spark-ignition engines to provide additional alternatives for qualifying to register in the Statewide Registration Program.
- Develop an incentives package to promote the registration of clean fuel (e.g., natural gas, propane, etc.) spark-ignition portable engines.
- Dredge engines operated on a continuous basis are required to be equipped with selective catalytic reduction (SCR) or equivalent control technology. Because SCR has not been proven completely effective for all types of dredging operations, there is a need for alternatives to this requirement.
- Allow engines and equipment units that operate within the boundaries of the California Outer Continental Shelf and State Territorial Waters to register with the Statewide Registration Program.
- Expand the associated equipment category to allow sand and gravel screening, rock crushing, and pavement crushing and recycling operations subject to federal New Source Performance Standards (NSPS) promulgated in 40 Code of Federal Regulations (CFR) Part 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, to register with the Statewide Registration Program.
- Update the existing requirements for equipment units and add requirements for source categories not covered in the Regulation.

In order to more effectively deal with major issues raised by the Workgroup, staff generated issue papers to address each issue. The issue papers contained background information and staff recommendations for consideration by Workgroup members. The Workgroup reviewed and commented on drafts of the issue papers which were utilized in drafting the proposed amendments to the Regulation.

## **2. Meetings and Workshops**

During the development of the proposed amendments to the Regulation, staff held conference calls and had numerous individual discussions via telephone with district staff and industry representatives to address the issues and propose solutions. In addition, staff met individually with industry representatives to discuss and resolve issues specific to that industry.

Three public workshops were held on the proposed amendments to the Regulation. The first was held August 18, 1998 at the Air Resources Board headquarters in Sacramento (Northern California). The second was held August 20, 1998 at the San Joaquin Valley Unified Air Pollution Control District in Bakersfield (Central California). The third was held August 21, 1998 at the South Coast Air Quality Management District in Diamond Bar (Southern California). A draft of the proposed amendments to the Regulation was presented at the workshops, and made available for discussion and comment.

Following the telephone conversations, meetings, and public workshops, staff revised the proposed amendments to the Regulation in consideration of the comments received. Staff made every effort to consider all comments and recommendations received in developing the proposed amendments to the Regulation.

## II.

### SUMMARY OF PROPOSED CHANGES TO THE REGULATION

In this section, we provide a plain English discussion of the major proposed amendments to the Regulation. The discussion in this section is intended to satisfy the requirements of Government Code 11346.2(a)(1), which requires that a noncontrolling “plain English” summary of the regulation be made available to the public.

Specific provisions covered in the discussion include eligibility requirements, technology and emission limit requirements, incentives to use lower emitting technologies, notification requirements, recordkeeping and reporting requirements, and fees for registration. A more detailed discussion of the proposed amendments to the Regulation may be found in the Chapter II: Technical Support Document.

#### A. PORTABLE EQUIPMENT ELIGIBLE FOR REGISTRATION

##### 1. Equipment Operating in State Territorial Waters

With the exception of equipment used in dredging operations, the Regulation prohibits owners/operators from registering portable engines and equipment units that operate within the boundaries of either the Outer Continental Shelf (OCS) or State Territorial Waters (STW). Instead, owners/operators must satisfy district permit program requirements to operate within the OCS or STW.

The U.S. EPA has delegated the authority to implement and enforce the federal OCS regulation to the districts. Existing federal law does not permit the U.S. EPA to grant dual permitting authority over OCS sources by allowing a district to regulate offshore stationary sources and the ARB to regulate offshore portable equipment. As a result, sources operating within the OCS will continue to be excluded from registration in the Statewide Registration Program. Federal law, however, does not restrict ARB’s ability to register portable engines and equipment units operating within STW. Therefore, staff proposes to amend the Regulation to allow engines and equipment units operating in STW to be included in the Statewide Registration Program.

In some instances, specific projects may occur in both the OCS and STW. For a project using portable engines and equipment units that operate in both the OCS and STW, the portable engines and equipment units will remain under the control of the onshore district. An owner/operator of a portable engine or equipment unit may have a district permit and a Statewide registration for offshore operations at the same time. However, for any given project, only one permit or registration can be valid for operation. For projects that occur in the OCS, OCS and STW, and where district mitigation requirements are triggered, district permits would supercede Statewide registration. District permits issued for mitigation purposes in the STW could not



impose any additional emission limit or control requirements beyond the Statewide registration.

## **2. Nonmetallic Mineral Processing Plants Subject to NSPS Subpart OOO**

The Regulation defines an equipment unit as a piece of equipment that emits air contaminants over and above those emitted from a portable engine and is driven solely by a portable engine. Any equipment unit subject to an applicable federal NSPS is not currently eligible for registration under the Regulation.

Because rock crushing-type operations frequently move throughout the State to perform various jobs, industry representatives requested that the Regulation be amended so the equipment units subject to federal NSPS Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, requirements may register. Staff proposes to amend the Regulation to allow “Subpart OOO sources” to register. U.S. EPA concern over which regulatory agency has authority over NSPS sources would be addressed by maintaining the current enforcement practices for federal NSPS. Districts with delegated authority from U.S. EPA would continue to enforce Subpart OOO requirements and conduct inspections. In districts without delegated authority from U.S. EPA, enforcement would continue to be the responsibility of the U.S. EPA.

## **3. Equipment Units Emitting Hazardous Air Pollutants**

The operation of equipment units at certain locations may result in the emission of hazardous air pollutants based on the nature or physical characteristics of the material being processed at that location. Examples include rock crushing and screening operations at serpentine quarries, and grinding of untreated wood waste (i.e. railroad ties). Staff proposes to amend the Regulation to exclude Statewide registration of equipment units that operate at a location which results in the emission of hazardous air pollutants. The equipment unit would be subject to the requirements of the district’s permitting program, including application and annual permitting fees, for the locations where operation of the equipment unit could result in emission of hazardous air pollutants. The Statewide registration would be valid only in locations where the operation of the equipment unit does not result in hazardous air pollutant emissions. The Statewide registration exclusion of portable equipment that emits hazardous air pollutants applies only to the equipment unit, and not the portable engine which may be associated with the equipment unit.

# **B. CHANGES TO EMISSION STANDARDS**

## **1. Projects in State Territorial Waters**

Portable engines and equipment units that operate in STW include dredging operations, piledriving, construction, and oil drilling activities. Some equipment operating in STW can use several large engines that operate continuously for long durations and generate significant emissions, compared to their land-based counterparts. Currently, the Regulation limits *all* engines to 10 tons per engine per district per year of criteria pollutant emissions, and limits equipment units to 10 tons per year of criteria pollutant emissions. Engines certified to meet the most stringent State or federal nonroad emission standards (certified engines) do not have any emission

limits. Because the Regulation is proposed to be amended to allow STW engines to register, staff proposes to include any applicable onshore district mitigation requirements in the proposed amendments to the Regulation in consideration of the potential for significant emissions from these engines.

Staff proposes to amend the Regulation so the existing 10 tons per engine per district per year limit in the Regulation applies *onshore* only for nitrogen oxides (NO<sub>x</sub>), particulate matter of 10 microns or less (PM<sub>10</sub>), sulfur oxides (SO<sub>x</sub>), volatile organic compounds (VOC), and carbon monoxide (CO) (in nonattainment areas).

Emissions from STW sources are proposed to be determined on a *per project* basis, rather than on a per engine or a per equipment unit basis. This is consistent with some districts' assessment of emissions from equipment operating in STW. Staff proposes to amend the Regulation so portable engines and equipment units operating within STW are subject to the mitigation requirements of the corresponding onshore district. If the mitigation requirements of the district are triggered, the portable engines and equipment units would not be allowed to operate above the district mitigation levels without first obtaining authorization from the district. Authorization would be in the form of existing district permits or could be obtained from the district by satisfying its mitigation requirements. When authorization is through existing district permits, the terms and conditions of the district permits supercede the requirements of the Statewide registrations if the requirements of the district permits are more stringent. If the portable engines and equipment units operate under district permits, the district would be able to collect any applicable fees. For STW engines that operate at a stationary source, the district would be able to require the owner/operator of the stationary source to provide the necessary mitigation. The requirements of the Regulation, including existing emission limits and engine requirements would continue to apply to engines and equipment units in STW.

## **C. CHANGES TO ENGINE REQUIREMENTS**

### **1. Engines Used in Dredging Operations**

Some districts require selective catalytic reduction (SCR) as best available control technology (BACT) for dredge engines that operate on a continuous basis. Because the California Health and Safety Code (HSC) section 41754 (a)(2) requires that the Statewide Registration Program preserve the most stringent district BACT requirements in effect on January 1, 1995, the Regulation requires dredge engines operating on a continuous basis to install SCR or equivalent control technology to achieve NO<sub>x</sub> emissions of 130 parts per million dry volume (ppmdv) @15% oxygen (O<sub>2</sub>) (equivalent to 1.7 grams per brake horsepower hour (g/bhp-hr)). Some dredge engines considered to be continuous, however, have not been able to meet the NO<sub>x</sub> requirement on a continuous basis without excessive ammonia emissions. As a result, staff proposes to amend the Regulation so SCR is no longer required for dredge engines. In order to compensate for the removal of the SCR requirement, staff proposes to amend the Regulation to include requirements for dredge engines that would achieve comparable emission reductions to the SCR requirement.

Staff proposes to amend the Regulation to require *all* dredge engines to meet the most stringent State emissions standards for off-road<sup>2</sup> engines or federal emissions standards for nonroad engines (certified levels) by January 1, 2005, five years earlier than the Regulation date of January 1, 2010 for all other engines. The emission reductions from the early retrofit or replacement along with the proposed mitigation requirements for STW sources would result in a greater air quality benefit than controlling a few continuous dredge engines with SCR. Resident dredge engines would be accepted into the Statewide Registration Program prior to January 1, 2005, subject to the existing engine emission limits and engine technology requirements in the Regulation. Resident dredge engines would be either retrofitted or replaced to meet certified levels no later than January 1, 2005. All non-resident dredge engines will be required to satisfy certified levels at the time of registration.

## **2. Spark-ignition Engines**

The Regulation specifies that resident spark-ignition engines either meet an emission limit or be equipped with a three-way catalyst. Without emissions data, spark-ignition engines are automatically required to be equipped with a three-way catalyst. This has been a problem for some engine owners who cannot readily obtain aftermarket catalyst systems.

As an alternative to the catalyst requirement, staff proposes to amend the Regulation to add the option of meeting daily operational emission limits of 100 pounds of NOx, 550 pounds of CO, and 100 pounds of VOC. The emission limits are representative of the emissions from an average-sized spark-ignition engine equipped with a catalyst.

## **3. Source Testing of Engines**

The Regulation limits source testing of engines for compliance purposes to not more frequently than once every three years (including testing at the time of registration), except when evidence of engine tampering, lack of proper engine maintenance, or other problems that could affect engine emissions are identified.

Staff proposes to amend the Regulation so engines certified to meet State or federal nonroad heavy duty diesel engine standards or engines certified to meet on-highway standards are not subject to further source testing. For an engine to receive certified status from either the State or the U.S. EPA, the engine manufacturer must satisfy a number of requirements which include providing emission data that demonstrates compliance with the State or federal standards (certified engines). The emission data must have been obtained from tests conducted in conformance with specific and rigorous test procedures. Certified engines would continue to be inspected by district staff to ensure any control equipment has not been tampered with and the

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<sup>2</sup> Off-road engine is the term used to identify the engines affected by the State program. Nonroad engine is the term defined in the Clean Air Act for the engines affected by the federal program. All references to nonroad are intended to include California off-road engines.

engine continues to meet the configuration of the certification.

For engines retrofitted to meet the equivalent emissions of a certified engine, staff proposes to amend the Regulation to exempt retrofitted engines from further source testing only if the retrofitted engine has satisfied the same certification testing procedures a new engine would undergo to receive certified status. A retrofitted engine that has not undergone the certification testing would be subject to an initial source test and could be required to do further testing by district staff.

#### **D. CHANGES TO PORTABLE EQUIPMENT UNIT REQUIREMENTS**

As discussed in Chapter I Section II.A.2., staff proposes to amend the Regulation to allow Subpart OOO sources to register with the Statewide Registration Program. The individual requirements for Subpart OOO sources are not proposed to be included in the proposed amendments to the Regulation. A single general condition is proposed to be added to the Regulation that specifies, where applicable, that the requirements of Subpart OOO shall be met. The actual registration certificates would include the specific conditions in order to aid sources and district staff in determining and verifying compliance.

Staff proposes to amend the Regulation to update the requirements for equipment unit categories already listed in the Regulation and add requirements for tub grinders/trommel screens. Tub grinders/trommel screens fall under the definition of portable equipment units; however, specific requirements for the units are not included in the Regulation.

Staff also proposes to amend the Regulation to add a provision to cover equipment units that could be registered with the Statewide Registration Program, but whose specific requirements are not listed in the Regulation. The provision would require that equipment units not listed in the Regulation are subject to the requirements of the most stringent district BACT in effect at the time of application as authorized by HSC section 41754 (a)(2).

#### **E. ADDITIONAL INCENTIVES FOR PROMOTING USE OF LOW-EMITTING TECHNOLOGIES**

##### **1. Exemption from Emission Limits and Recordkeeping and Reporting**

The Regulation contains a number of incentives to encourage early replacement of older portable engines. Any engine meeting the State or federal emissions standards for nonroad engines (certified engine) is exempt from the daily and annual emission limits and recordkeeping and reporting requirements. However, there are currently only State and federal emissions standards for nonroad compression-ignition engines up to 750 bhp.

To encourage the use of cleaner technologies, staff proposes to amend the Regulation to incorporate incentives for spark-ignition engines that meet the more stringent of an applicable State or federal emission standard in effect at the time of registration or the *non-resident* emission

levels in the Regulation. The incentives would consist of exemption from the daily and annual emission limits and recordkeeping and reporting requirements. The Regulation currently authorizes exemption incentives for compression-ignition engines that meet the emissions standards for State or federal nonroad regulations. Parallel incentives are proposed for spark-ignition engines given that the emission levels are comparable or lower than compression-ignition engines.

## **2. Extension of Compliance Plan Duration**

The Regulation allows owners/operators of registered portable engines to obtain a temporary exemption, not to exceed 18 months, from the daily and annual emission limits and recordkeeping and reporting requirements by submitting a compliance plan to replace existing engines with newly-manufactured engines or to modify the engines to meet the requirements for new engines set under 40 CFR Part 89 or Title 13 of the California Code of Regulations (CCR).

To encourage turnover of large engine fleets, staff proposes to amend the Regulation to extend the 18-month exemption period to 24 months for 50 or more engines and 36 months for 100 or more engines. To ensure the timely turnover of the engines, the owner/operator would be required to demonstrate measurable progress toward replacement or modification. Progress would be outlined and verified in an annual report to the ARB Executive Officer, which would detail the progress made toward meeting the terms of the compliance plan.

## **F. CHANGES TO RECORDKEEPING AND REPORTING REQUIREMENTS**

### **1. Calculation of Engine Daily Fuel Use**

The Regulation requires owners of registered portable engines to maintain daily operational records. The records must include information on the total fuel used and estimated hours of operation or the actual hours of operation. Determination of daily fuel use is problematic for owners/operators whose engines are not equipped with fuel flow meters when more than one engine pulls fuel from a single tank, or when fuel is not added on a daily basis.

To aid owners/operators in complying with the recordkeeping requirements of the Regulation, staff proposes to amend the Regulation to include acceptable methods of calculating daily fuel use where a fuel flow meter is not present.

## **2. Notification for Projects in State Territorial Waters**

As stated in Chapter I Section II.B.1., staff proposes to amend the Regulation to include a requirement that STW projects satisfy the applicable offset requirements for each corresponding onshore district the equipment operates in. To ensure that districts are aware of STW projects occurring within their jurisdiction and have enough time to evaluate and secure mitigation for projects that will trigger offsets, staff proposes to amend the Regulation to include a notification requirement for all STW projects. Owners/operators of equipment operating in a STW project would be required to notify the appropriate district at least 14 days prior to operation. The owners/operators would be required to notify the corresponding onshore district in writing, via facsimile, or by telephone.

### **G. ADMINISTRATIVE CHANGES**

The Regulation requires submittal of a registration application for a non-resident engine before July 1, 1998, or the engine must meet the most stringent emissions standards mandated for California- or federally-certified newly-manufactured engines. If there is no emissions standard, then the engine must meet the non-resident engine requirements of the Regulation. Because the proposed amendments to the Regulation would allow new sources to register, staff proposes to amend the Regulation to extend the July 1, 1998, deadline to July 1, 2000. The extra window of time should be sufficient to allow newly eligible engines and equipment units to register and have sufficient time to plan for the more stringent emission standards that become effective January 1, 2010.

### **H. CHANGES PERTAINING TO FEES**

The only change proposed at this time regarding fees is to include a provision to allow districts to collect a fee for costs incurred for implementing and enforcing the requirements of 40 CFR Part 60 Subpart OOO for nonmetallic mineral processing plants. Source inspections for this category are generally more complicated and time-consuming than for other State-registered engines or equipment units; so this amendment would allow districts to recover their enforcement costs. The fee, however, cannot exceed the actual costs, including staff time, for enforcing the requirements. If noncompliance is discovered, districts would be able to charge for their actual costs of conducting investigations in order to resolve violations.

### **III.**

#### **ENVIRONMENTAL IMPACTS AND CONSISTENCY WITH THE STATE IMPLEMENTATION PLAN**

State law requires that the Statewide Registration Program not interfere with the attainment or maintenance of State or federal ambient air quality standards or cause an exceedance of any ambient air quality standard. In addition, the ARB is required, in consultation with affected districts, to amend the SIP as necessary to include the amendments to the Regulation and conform the SIP to its requirements.

##### **A. ENVIRONMENTAL IMPACTS**

Staff has conducted an analysis of the potential environmental impacts of the proposed amendments to the Regulation. The implementation of the proposed amendments to the Regulation is not expected to have any adverse environmental impacts. The proposed amendments to the Regulation will have an overall positive environmental impact and will not interfere with the attainment or maintenance of State or federal ambient air quality standards. Maintenance of ambient air quality standards is achieved, because the proposed amendments to the Regulation retain emission controls and emission limitations that minimize emissions from portable engines and equipment units and promote the use of, and switch to, lower emitting technologies. The proposed allowance of newly eligible portable equipment is not expected to have a significant impact. Staff anticipates that the majority of portable engines and equipment units that would seek State registration are already under district permit or registration. Under the proposed amendments to the Regulation, this equipment would be subject to similar or more stringent control technologies and/or emission limits than required by the districts. In addition, the proposed amendments provide a means to mitigate excess emissions from equipment operating in STW by requiring that corresponding onshore district offset requirements be satisfied.

##### **B. CONSISTENCY WITH THE STATE IMPLEMENTATION PLAN**

Staff has conducted an analysis to determine the potential impacts of the proposed amendments to the Regulation on commitments contained in the SIP. Staff's analysis shows that in each air basin, the proposed amendments to the Regulation would not impact SIP commitments, because proposed changes are consistent with district permitting and registration programs already in place.

## **IV.**

### **ECONOMIC IMPACTS**

Applicants affected by the proposed amendments to the Regulation are expected to benefit from the amendments. The major changes include: allowing State-registered equipment to operate within STW and allowing additional categories of portable equipment to register. For the affected businesses, the proposed amendments to the Regulation are expected to improve the California business climate by eliminating the need for duplicative permits, allowing increased flexibility, and reducing the costs of operation. Staff expects the proposed amendments to the Regulation to have positive impacts on California employment, business status, and business competitiveness.



**V.**

**RECOMMENDATION**

Staff recommends that the Board adopt the proposed amendments to the Regulation for the Statewide Portable Equipment Registration Program.

## **CHAPTER II: TECHNICAL SUPPORT DOCUMENT**

## I.

### INTRODUCTION AND BACKGROUND

#### A. OVERVIEW

The technical support document outlines Air Resources Board staff's (staff) recommendations for amending the Statewide Portable Equipment Registration Program Regulation (Regulation) as adopted by the Air Resources Board (Board) on March 27, 1997. The recommendations were developed by staff in consultation with affected industry, interested parties, local air pollution control and air quality 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 amendments to the Regulation<sup>3</sup>. The proposed amendments and supporting information were developed in collaboration with interested parties. The districts, engine manufacturers, equipment-rental industry, sand and gravel industry, construction industry, oil-production industry, and other regulated industries all furnished insightful and useful technical information needed to develop the proposed amendments. In addition, information from technical reports, regulatory agencies, and other sources was used. A copy of the proposed amended Regulation is included in Appendix A.

This technical support document presents the following information:

- Process used to develop the proposed amendments to the Regulation;
- Discussion of the requirements and provisions of the proposed amendments to the Regulation;
- Discussion of economic considerations; and
- Discussion of air quality considerations.

#### B. BACKGROUND

The Regulation for the Statewide Registration Program became effective September 17, 1997. From the effective date until October of 1998, the ARB has received 640 registration applications representing approximately 10,000 portable engines and equipment units. Of the applications received, staff has approved 431 applications and issued registration certificates for about 3,400 portable engines and equipment units and 4,900 pieces of military tactical support equipment (TSE). For the remaining portable engines and equipment units, either the applicant

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<sup>3</sup> When used in this Technical Support Document, Regulation refers to the regulation adopted by the Board on March 27, 1997, which implemented, interpreted, and made specific the provisions of Health & Safety Code Sections 41750 through 41755.

has withdrawn the portable engine or equipment unit for consideration of Statewide registration or staff is currently evaluating the applications for Statewide registration. The average processing time for an application has been about 64 days. Currently, staff is traveling throughout California to meet with districts to discuss implementation, inspection, and enforcement aspects of the Statewide Registration Program. In addition, staff has developed, in consultation with local districts, a compliance website to allow district inspectors access to registration data and to share inspection results with other districts.

Upon adoption of the Regulation on March 27, 1997, the Board directed staff to work closely with industry, local air districts, and the U.S. EPA to address and resolve issues arising during implementation of the Statewide Registration Program and return to the Board within one year of implementation with any proposed amendments. The issues that the Board directed staff to address include:

- Evaluation of the applicability of the Statewide Registration Program to portable engines operated in California territorial coastal waters, in consultation with affected local districts, sources, and U.S. EPA; and
- Evaluation of the control technology, emission standards, program effectiveness, and adequacy of fees, including the sufficiency of enforcement fees to cover the reasonable costs of enforcement.

California Health and Safety Code (HSC) section 41752 (e) states that the ARB may periodically amend and update the Regulation. In making amendments to the Regulation, staff is required by the law to evaluate how proposed changes affect the emission of pollutants, to identify emission reduction technologies that may be applied or updated, to hold at least one public hearing, to assess the effectiveness of emission limits and emission control requirements, and to develop a fee schedule to cover any additional costs of administering program amendments.

## **C. PUBLIC PROCESS TO DEVELOP PROPOSED REGULATION AMENDMENTS**

### **1. Workgroup**

Staff developed the proposed amendments to the Regulation in consultation with a workgroup 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. This group, known as the Portable Equipment Registration Workgroup (Workgroup), discussed the regulatory amendments needed to address issues discovered during implementation of the Regulation, which were consistent with the requirements and intent of the law and resolved the implementation concerns of affected parties. The names of the Workgroup members are included in the acknowledgments in the preface of this report.

The Workgroup assisted staff in identifying issues of concern and developing the proposed amendments to the Regulation. To more effectively deal with major issues raised by the

Workgroup, staff conducted meetings and generated issue papers with recommendations for consideration by the Workgroup. The following actions were suggested by the Workgroup for incorporation into the proposed amendments:

- Modify emission limits and/or technology requirements for resident spark-ignition engines to provide additional alternatives for qualifying to register in the Statewide Registration Program;
- Develop an incentives package to promote the registration of clean-fuel (e.g. natural gas, propane, etc.) spark-ignition portable engines;
- Evaluate the requirement that dredge engines operated on a continuous basis be equipped with selective catalytic reduction (SCR) or equivalent control technology since SCR has not been proven completely effective for all types of dredging operations; evaluate the need for the possible alternatives to this requirement;
- Allow engines and equipment units that operate within the boundaries of the California Outer Continental Shelf (OCS) and State Territorial Waters (STW) to register with the Statewide Registration Program;
- Expand the associated equipment category to allow sand and gravel screening, rock crushing, and pavement crushing and recycling operations subject to federal New Source Performance Standards (NSPS) promulgated in 40 Code of Federal Regulations (CFR) Part 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, to register with the Statewide Registration Program; and
- Update the existing requirements for equipment units and add requirements for source categories not covered in the Regulation.

The Workgroup reviewed and commented on the issue papers that the staff used in drafting the proposed amendments to the Regulation.

## **2. Meetings and Workshops**

During the development of the proposed amendments to the Regulation, staff conducted conference calls and had numerous individual discussions via telephone with district staff, U.S. EPA staff, and industry representatives to address the Regulation issues and propose solutions. Staff also met individually with industry representatives to discuss and resolve issues specific to those industries.

Three public workshops were held on the proposed amendments to the Regulation: August 18, 1998, at ARB headquarters in Sacramento (Northern California), August 20, 1998, at the San Joaquin Valley Unified Air Pollution Control District in Bakersfield (Central California), and August 21, 1998, at the South Coast Air Quality Management District in Diamond Bar (Southern California). A draft of the proposed amendments to the Regulation was presented at the workshops, and made available for discussion and comment. Following the workshops, ARB staff modified the proposed amendments in consideration of the comments received.

#### **D. PROGRAM EFFECTIVENESS AND ADEQUACY OF FEES**

As mentioned above, the Board directed staff to evaluate the effectiveness of the Statewide Registration Program and to evaluate the fee structure contained in the Regulation. There has not been enough data generated during the initial year of implementation for staff to make any meaningful assessments regarding the effectiveness of the Statewide Registration Program in terms of emission reductions, or for making any recommendations for amending the fee structure contained in the Regulation. Staff will continue to monitor the Statewide Registration Program effectiveness and overall fee structure, and report back to the Board at a later date.

## **II.**

### **PROPOSED AMENDMENTS TO STATEWIDE REGISTRATION PROGRAM**

#### **A. INTRODUCTION**

The Regulation was adopted by the Board with modifications on March 27, 1997, and subsequently became effective on September 17, 1997. Board Resolution 97-16 directed staff, in consultation with affected districts, sources, and U.S. EPA, to evaluate the Statewide Registration Program and to identify and resolve any issues raised during the first year of Statewide Registration Program implementation. The Board instructed staff to report back within one year of implementation of the Regulation with any recommended amendments.

During the first year of implementation of the Statewide Registration Program, staff has worked in conjunction with industry representatives, districts, and the U.S. EPA to resolve issues that surfaced.

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

#### **B. AMENDING THE ELIGIBILITY REQUIREMENTS FOR STATEWIDE REGISTRATION**

##### **1. Outer Continental Shelf and State Territorial Waters**

In Resolution 97-16, the Board directs staff to evaluate the applicability of the Regulation to portable engines operated in the Outer Continental Shelf (OCS) and State Territorial Waters (STW). Section 2451 (c)(6) of the Regulation prohibits owners/operators from registering portable engines and equipment units that operate within the boundaries of either the OCS or STW, with the exception of equipment used in dredging operations. Instead, owners/operators must satisfy district permit program requirements in order to operate this equipment within the OCS or STW.

Staff proposes to amend the Regulation to allow equipment that operates in STW to register with the Statewide Registration Program. Equipment operating within the boundaries of the OCS will still be excluded from registration.

The OCS covers the waters between 3 to 25 miles from the California coastline. STW encompasses the waters extending from the coastline to 3 miles offshore, including bays, estuaries, rivers, and other inland waterways.

Sources operating within the boundaries of the OCS are subject to the federal requirements contained in 40 CFR Part 55, Outer Continental Shelf Air Regulations. The U.S. EPA, through federal rulemaking (see Title 40 CFR Part 55 section 55.11(j)), has delegated the authority to implement and enforce the OCS regulation directly to the districts. Sources operating within the boundaries of STW are subject to the regulations of the corresponding onshore district.

Correspondence dated April 27, 1998, from the U.S. EPA (see Appendix B) clarifies the agency's interpretation of regulatory jurisdiction over sources operating within the OCS. U.S. EPA has advised that existing federal law does not permit the U.S. EPA to grant dual delegation for OCS sources thereby disallowing district regulation of sources as offshore stationary sources and ARB regulation of sources as offshore portable equipment. Under federal law, for sources permitted by a district in the OCS, the district has sole jurisdiction for the source for the life of the source. This jurisdiction includes portable engines and equipment units operating at the source. Consequently, sources operating within the OCS are ineligible for registration in the Statewide Registration Program. Because the district has authority over all activity occurring in the OCS, projects operating in both the OCS and STW remain under the jurisdiction of the corresponding onshore district. Federal law, however, does not restrict the ARB's ability to register portable engines and equipment units operating within STW. Therefore, staff proposes that equipment operating in STW be included in the Statewide Registration Program.

The owner/operator of a portable engine or equipment unit may have both a district permit and a Statewide registration for offshore operations. However, only one district permit or registration can be valid for operation for any given project. Districts permits would supercede Statewide registration for projects that occur in the OCS, projects that occur in the OCS and STW, and projects that trigger district mitigation requirements. District permits issued for mitigation purposes in STW would not impose any additional emission limit or control technology requirements beyond those required by the Statewide registrations.

## **2. Nonmetallic Mineral Processing Plants Subject to NSPS Subpart OOO**

The Regulation defines an equipment unit as a piece of equipment that emits air contaminants over and above those emitted from a portable engine and is associated with, and driven solely by, a portable engine. Equipment units are eligible for registration as part of the Statewide Registration Program (HSC sections 41751 and 41753). Nonetheless, equipment units are considered stationary sources under federal law and may be subject to federal requirements (Title 40 CFR Part 60). To avoid conflicts between the Statewide Registration Program and federal programs, equipment units subject to certain programs are not eligible for registration under the Regulation. Specifically, any equipment unit subject to an applicable federal New Source Performance Standard (NSPS) is currently not eligible for registration under the Statewide Registration Program (section 2451 (c)(5), Title 17, California Code of Regulations (CCR)).

Staff proposes to amend the Regulation to allow registration of rock crushing-type operations subject to federal NSPS Subpart OOO, Standards of Performance for Nonmetallic



Mineral Processing Plants (Title 40 CFR Part 60, Subpart OOO).

U.S. EPA has expressed concern that inclusion of “Subpart OOO sources” in the Statewide Registration Program might raise issues of delegation of authority. Under Federal Clean Air Act section 111 (c), U.S. EPA is responsible for enforcing NSPS provisions that have not been delegated to state or local agencies.

Although HSC section 41755 states that districts shall enforce the Statewide Registration Program, staff proposes to continue the current enforcement authority and practice for federal NSPS Subpart OOO sources. Districts with delegation of authority will continue to enforce Subpart OOO requirements and conduct inspections. In districts without delegation, the U.S. EPA will enforce the Subpart OOO requirements. To avoid confusion for sources moving from a non-delegated district to a delegated district and vice versa, required federal notifications and records (apart from those associated with performance tests or equipment/process changes) will be made available to U.S. EPA Region IX and to the district the source is operating in. Reconstructions or modifications, generally involving equivalent replacements or process changes, require application submittal under the Regulation and will be handled through the registration process accordingly. In the case of a new facility subject to the NSPS, or a reconstruction or modification of an existing source, ARB staff will perform the initial compliance review, including reviewing the results of compliance source tests.

### **3. Equipment Units Emitting Hazardous Air Pollutants**

The operation of equipment units at certain locations may result in the emission of hazardous air pollutants based on the nature or physical characteristics of the material being processed at that location. Examples include rock crushing and screening operations at serpentine quarries, and grinding of untreated wood waste (i.e. railroad ties). Staff proposes to amend the Regulation to exclude Statewide registration of equipment units that operate at a location which results in the emission of hazardous air pollutants. The equipment unit would be subject to the requirements of the district’s permitting program, including application and annual permitting fees, for the locations where operation of the equipment unit could result in emission of hazardous air pollutants. The Statewide registration would be valid only in locations where the operation of the equipment unit does not result in hazardous air pollutant emissions. The Statewide registration exclusion of portable equipment that emits hazardous air pollutants applies only to the equipment unit, and not the portable engine which may be associated with the equipment unit.

The proposed amendment to exclude Statewide registration of equipment units that operate at a location which results in hazardous air pollutant emissions is not intended to create any new requirements for equipment units. Rather, it is intended to maintain the ability of district programs to perform a site specific analysis of hazardous air pollutant impacts for locations where an analysis is warranted, in the interest of protecting the public health and welfare.

## **C. REVIEW OF EMISSION STANDARDS**

## **1. Spark-ignition Engines**

For resident spark-ignition engines, Table 2 of section 2456 of the Regulation specifies that the engines either meet an emission limitation or be equipped with a three-way catalyst. Since most spark-ignition engines are older engines or engines pulled from vehicles, emission data is not readily available. Without emissions data, the requirement for a three-way catalyst is automatically triggered. This has been a problem for most spark-ignition engine owners because aftermarket catalyst systems are not readily available for all engine families.

As an alternative, staff proposes to amend the Regulation to provide the option of meeting daily operational emission limits in lieu of meeting an emission concentration limit or installation of a three-way catalyst. The daily operational limits proposed are 100 pounds of nitrogen oxides (NO<sub>x</sub>), 550 pounds of carbon monoxide (CO), and 100 pounds of volatile organic compounds (VOC). These emission limits are representative of what a typical spark-ignition engine equipped with a catalyst would emit during a typical operating scenario.

In addition, staff proposes to amend the CO limit in the Regulation for resident spark-ignition engines. The 25,344 parts per million dry volume (ppmdv) [288 grams per brake horsepower-hour (g/bhp-hr)] value for CO was based on an outdated U.S. EPA Compilation of Air Pollutant Emission Factors (AP-42) value. Staff proposes to lower the CO value to the current AP-42 value of 17,600 ppmdv [200 g/bhp-hr].

## **D. REQUIREMENTS**

### **1. State Territorial Waters**

Equipment that typically operates within STW includes units used in dredging operations, piledriving, construction, and oil drilling activities. The Regulation limits annual criteria pollutant emissions to 10 tons per district per year for each engine and 10 tons per year for equipment units onshore and for dredge engines in STW. Engines certified to meet State or federal emission standards are exempt from daily and annual emission limits.

In proposing to amend the Regulation to allow STW equipment to register, staff considered a number of options in developing the requirements for portable engines and equipment units that operate within STW. Staff considered applying the 10 tons per engine per district per year limit from the Regulation to registered equipment operating within STW. Some STW equipment, such as hydraulic suction dredges, generally utilize several large engines that can add up to 8,000 bhp and operate continuously for long periods of time. These STW sources are larger than any portable source that operates on land. Due to the potential for projects that emit significant amounts of air emissions and the reduced ability of local districts to require mitigation from State-registered equipment operating within STW, staff proposes to amend the Regulation to include specific requirements for STW equipment which are consistent with the mitigation requirements of each district's New Source Review (NSR) requirements. District mitigation requirements would be incorporated into the proposed amendments in an effort to minimize the

air quality impact of State-registered STW sources on each district’s attainment commitments. The proposed requirements are described below.

Except for portable engines and equipment units that operate at stationary sources located within STW, staff proposes to amend the Regulation to require that portable engines and equipment units operating within STW be subject to the mitigation requirements of the corresponding onshore district. If the mitigation requirements of the district are triggered, the portable engines and equipment units would be required to obtain authorization from the district before operating. Authorization could be obtained from the district by satisfying mitigation requirements or in the form of an existing permit. When authorization is through a district permit, the terms and conditions of the district permit supercede the requirements of the Statewide registration, if the requirements of the district permit are more stringent. In addition, a portable engine or equipment unit that would operate under a district permit as opposed to a Statewide registration, would be subject to applicable district fees. For STW engines and equipment units considered to be operating at a stationary source, the district may require the owner/operator of the stationary source to provide the necessary mitigation. The requirements of the Regulation, including emission limits and engine requirements, continue to apply to equipment in STW.

In addition, emissions from STW sources are proposed to be determined on a *per project* basis, rather than on a per engine or a per equipment unit basis. This is consistent with some districts’ assessment of emissions from engines and equipment units operating in STW.

All other requirements of the Regulation, such as daily emission limits and engine technology requirements, would still be applicable to engines and equipment units operating within STW.

The existing 10 tons per engine per district per year limit in the Regulation would be amended to apply *onshore* only for NOx, particulate matter of 10 microns or less (PM<sub>10</sub>), sulfur oxides (SOx), VOC, and CO (in nonattainment area). When a portable engine operates both onshore and within STW, the 10 tons per engine per district per year limit would apply when the engine is onshore and the corresponding onshore district offset limit would apply only when the engine operates within STW. When a portable engine operates in both the OCS and STW, the engine would be subject to the corresponding onshore district’s permitting requirements for the entire project due to district delegation from U.S. EPA for authority in the OCS. The proposed onshore and offshore emission limits for portable engines are summarized in Table II-1.

**Table II-1  
Summary of Proposed Changes to Emission Limits for Portable Engines**

	Onshore Engines		STW Engines	
	Resident	Non-resident	Resident	Non-resident

<b>Daily and Annual Emission Limits</b>	- 10 tons CO (nonattainment), NOx, PM <sub>10</sub> , SOx, and VOC per district per year per engine  - 100 lbs NOx per project per day in South Coast Air Quality Management District (SCAQMD) only  - 550 lbs CO per day  - 150 lbs PM <sub>10</sub> per day	- 10 tons CO (nonattainment), NOx, PM <sub>10</sub> , SOx, and VOC per district per year per engine  - 100 lbs NOx per engine per day (all districts except for SCAQMD)  - 100 lbs NOx per project per day in SCAQMD only  - 550 lbs CO per day  - 150 lbs PM <sub>10</sub> per day	- 100 lbs NOx per STW project per day in SCAQMD only*  - 550 lbs CO per day*  - 150 lbs PM <sub>10</sub> per day*	- 100 lbs NOx per engine per day (all districts except for SCAQMD)*  - 100 lbs NOx per project per day in SCAQMD only*  - 550 lbs CO per day*  - 150 lbs PM <sub>10</sub> per day*
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\* In addition, meet corresponding onshore district’s mitigation requirements based on each district’s offset trigger levels. Offset trigger levels may/may not be less than the daily emission limit, or may be an annual limit.

**a. Definition of Project for State Territorial Waters**

Staff proposes to amend the definition of “project” by creating two definitions. One definition would apply to *onshore* operation and the other would apply to project within STW.

It is staff’s intent that the definition of “project for the purposes of STW” be practical for the operators of the equipment, while maintaining the air quality and enforceability concerns of the districts. Of particular concern are construction, dredging, and oil field service companies that operate on a contractual basis. It is useful to define STW project in contract terms to avoid any confusion on the part of the operators. All registered engines used for the contract activities and which support the activities would be considered one project. By including all registered engines used on a contracted job, all of the engines would contribute to the project emissions, and the districts would not be burdened with determining which engines are or are not to be included in calculating project emissions.

It is impractical to define “area” within the STW project definition as a specific location or property. The nature of STW projects requires work to be done over a wide region, as in the case of a construction barge floating along a channel. Attempted circumvention of the project emission limits should be averted by the consolidation of multiple and sequential contracts. Consolidation of multiple and sequential contracts would prevent operators from splitting up a single job into several different contracts in order to bypass the project emission limit.

## 2. Engines Used in Dredging Operations

Dredging of navigable waterways can be accomplished by utilizing a hydraulic suction dredge, a clamshell dredge or a hopper-type dredge. A hydraulic suction dredge uses a cutterhead and pump to continually remove material from the area being dredged. A clamshell dredge uses a crane equipped with a clamshell scoop to fill a hopper on an associated barge. A hopper dredge uses a pump to fill material into an on-board storage hopper which is eventually unloaded in deeper waters. All three dredge types may have associated equipment on support barges, such as anchor barges, that are integral to the dredging operation.

HSC section 41754 (a)(2) requires that the Statewide Registration Program preserve the most stringent district Best Available Control Technology (BACT) requirements for portable engines and equipment units in effect January 1, 1995, to the extent not in conflict with federal law. Historically, districts have established more stringent emission control requirements for dredging operations than other engine applications since dredging operations are energy intensive processes. Some districts have determined that SCR is effective for hydraulic suction dredge engines that operate at fairly constant speed (rotations per minute) over the course of the day. As a result, SCR or equivalent control technology is required by the Regulation as BACT for dredge engines that operate on a continuous basis (i.e. hydraulic dredges) to achieve NO<sub>x</sub> emissions of 130 ppm<sub>dv</sub> @ 15% O<sub>2</sub> (1.7 g/bhp-hr). Dredges which operate intermittently are required to meet the limitations in sections 2455-2456 of the Regulation. The Regulation requires that all registered engines, including all dredge engines, be replaced or retrofitted to meet certified emission levels by January 1, 2010.

Based on information provided by the dredging industry, dredges considered to be in continuous operation have not always satisfied the NO<sub>x</sub> emission requirement in the Regulation on a continuous basis without a high ammonia slip. Staff believes SCR is less efficient for an engine that operates for long periods at idle, at low power outputs, or extreme variations in load. For example, an engine used in an operation where the load of the engine varies, typically does not maintain the constant exhaust temperature necessary for an SCR unit to operate at maximum efficiency. Therefore, staff proposes to amend the Regulation so SCR is no longer required for dredge engines. Proposed alternatives to the SCR requirement for dredge engines that would achieve comparable emissions are detailed as follows.

**a. Retrofit Requirement**

According to industry sources, there are approximately four hydraulic suction dredges in operation at a given time in California, out of a total of about twenty-three dredges. The Regulation requires that all registered engines, including all dredge engines, be replaced or retrofitted to meet certified emission levels by January 1, 2010.

Staff proposes requiring all engines operated on a dredge to meet the more stringent emission standard of, either the federal emission standards for nonroad engines, pursuant to 40 CFR Part 89, or State emission standards for off-road<sup>4</sup> engines (certified levels), pursuant to Title 13 CCR, by January 1, 2005, five years earlier than in the Regulation. If the engines used on all registered dredges were retrofitted or replaced ahead of schedule by 2005, those emissions reductions along with the proposed mitigation requirement for projects in STW (see Chapter II Section II.D.1 regarding STW project limits) would result in an overall air quality benefit greater than merely controlling a few hydraulic suction dredges with SCR.

**b. Resident Dredge Engine Requirement**

Prior to January 1, 2005, resident dredge engines would be accepted into the Statewide Registration Program under the requirements for engines listed in section 2456 (e) of the Regulation. Resident dredges would be required to retrofit with engines meeting certified levels on all State-registered dredges no later than January 1, 2005.

**c. Non-resident Dredge Engine Requirement**

All types of non-resident dredge engines would be required to be equipped with engines meeting certified levels.

**d. Dredge Engines Excluded from the Statewide Registration Program**

Staff proposes adding a provision to the Regulation to exclude dredges owned by a single port authority, harbor district, or similar agency in control of a harbor and that are operated only within that harbor from registering with the State. These dredges typically do not satisfy the definition of “portable” that limits operations in one location to a maximum of 12 months.

Because of the historical use of an electric dredge in Santa Barbara Harbor, staff proposes to add a provision excluding dredging operations in the Santa Barbara Harbor from the Statewide

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<sup>4</sup> Off-road engine is the term used to identify the engines affected by the State program. Nonroad engine is the term defined in the Clean Air Act for the engines affected by the federal program. All references to nonroad are intended to include California off-road engines.

Registration Program. Any dredge company that wishes to operate in the Santa Barbara Harbor would need to apply for a permit with the Santa Barbara County Air Pollution Control District.

### **3. Incentives for Phasing in the Use of Cleaner Fuels**

Staff considered incorporating incentives into the Regulation to promote the use of clean-fuel (e.g. natural gas, propane, etc.) spark-ignition engines which can achieve emissions below those of primarily diesel-fueled compression-ignition engines. Possible incentives suggested included (1) reduced administrative burden placed on applicants through simplification of documentation required with each registration application and (2) provision of emission reduction credits (ERCs) for engines meeting emission levels below the requirements in the Regulation. Because the current documentation required by the Regulation is the minimum necessary to verify which requirements are applicable to each engine, staff is not proposing any changes to this requirement. Staff has the responsibility to ensure that each engine will meet its requirements prior to issuance of the registration certificate. Providing ERCs for engines meeting emission levels below the requirements is not feasible within the scope of the Statewide Registration Program. ERCs are a part of each district's permitting requirements and are beyond the scope of the Statewide Registration Program. For example, district ERC regulations require more extensive recordkeeping over a period of two consecutive years to quantify the amount of reduction from the engine and the reductions achieved. Also, ERCs are limited to geographical areas. Due to the transient nature of portable equipment and an inability to ensure that generation and use result in an air quality benefit, issuance of ERCs are not practical on a Statewide basis. This type of program is better left to the districts to implement and enforce. The staff is, therefore, not proposing changes to the Regulation in this area.

### **4. Incentives for Phasing in Cleaner Spark-ignition Engines**

The Regulation provides incentives for use of lower emitting technologies. Any portable engine meeting the State or federal emissions standards for nonroad engines contained in Title 13 CCR or 40 CFR Part 89 is not subject to daily and annual emission limits and recordkeeping and reporting requirements. In addition, section 2456 (f) of the Regulation provides a temporary exemption for an allotted time frame (see subsequent Chapter II Section II.D.6) from daily and annual emission limits and recordkeeping and reporting requirements for an owner/operator who agrees to replace or modify a registered engine to meet the State or federal new engine emissions standards on an expedited schedule. This exemption requires submittal of a compliance plan which outlines the replacement and/or modification information. The State and federal emissions standards, however, are only applicable to nonroad compression-ignition (CI) engines. There are no similar incentives awarded spark-ignition (SI) engines that can achieve comparable emission levels (see Tables II-2 and II-3). Currently, there are no State or federal emission standards for SI engines of at least 25 bhp capacity. ARB's Mobile Source Control Division is in the process of developing regulations to establish emission standards and requirements for new spark-ignition engines 25 bhp and greater for use in certain nonroad equipment.

In order to encourage the use of clean-fuel spark-ignition engines such as those powered by natural gas and propane, staff proposes that incentives be incorporated into the Regulation. The incentives would consist of extending the same benefits afforded CI engines to SI engines meeting the more stringent of, the non-resident engine emissions limits for SI engines listed in Table 2 of the Regulation, or an applicable emissions standard in effect at the time of registration application. The non-resident SI engine emission requirements in the Regulation are consistent with the most stringent local district BACT levels for this class of source. The non-resident emission levels are comparable or lower than the State and federal emissions standards for CI engines, so the same incentives given to CI engines are proposed to be expanded to SI engines.

**Table II-2  
State and Federal Compression-Ignition Engine Emission Standards**

<b>Nonroad Compression-ignition Engine Standards</b>						
Year	Agency	Rated Brake Horsepower	CO [g/bhp-hr]	NOx [g/bhp-hr]	PM [g/bhp-hr]	HC [g/bhp-hr]
1996	ARB/U.S. EPA	175-750	8.5	6.9	0.4	1.0
1997	U.S. EPA	100-<175	-	6.9	-	-
1998	U.S. EPA	50-<100	-	6.9	-	-
2000+	ARB/U.S. EPA	750+	8.5	6.9	0.4	1.0
2001+	ARB	175-750	9.5	5.8	0.16	1.0
2005-2009	CA SIP		8.5	2.5	0.16	1.0

**Table II-3  
Statewide Registration Program Spark-ignition Engine Requirements**

<b>Spark-ignition Engine Requirements</b>			
Engine Status	Pollutant Emission Limit or Control Technology		
	NOx	VOC	CO
Resident	213 ppm <sub>dv</sub> (4.0 g/bhp-hr) OR catalyst	800 ppm <sub>dv</sub> (5.0 g/bhp-hr) OR catalyst	23,344 ppm <sub>dv</sub> (288 g/bhp-hr)* OR catalyst
Non-resident	80 ppm <sub>dv</sub> (1.5 g/bhp-hr)	240 ppm <sub>dv</sub> (1.5 g/bhp-hr)	176 ppm <sub>dv</sub> (2.0 g/bhp-hr)

\* Proposed to be lowered to 200 g/bhp-hr consistent with AP-42 (see previous section II.C.1).



## **5. Recordkeeping and Reporting**

HSC section 41754 requires that any recordkeeping and reporting requirements prescribed by the ARB for the Statewide Registration Program be the minimum necessary to provide sufficient emission inventory data and allow adequate enforcement of the program. In order to satisfy this requirement, the Regulation requires owners of registered portable engines and equipment units to maintain daily operational records and submit an annual report to the ARB consisting of quarterly operations summaries. Although quarterly summaries must 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 may 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 businesses. Any portable engine meeting an applicable emissions standard, as set forth in Title 13 CCR or 40 CFR Part 89, is exempt from the recordkeeping and reporting requirements. Staff is proposing additions or changes to the recordkeeping and reporting requirements in the following areas.

### **a. Daily Recordkeeping for Engines**

The Regulation requires that daily records be maintained by the engine owner/operator at a central location for two years, and made available to the ARB Executive Officer or districts upon request. The intent of keeping 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's Statewide Registration Program number;
- Reporting date to include the month, day, and year;
- Districts where the engine 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.

If recordkeeping of daily fuel use and estimated hours is chosen, owners/operators may experience difficulty determining the actual daily fuel use for individual engines, because most are not equipped with fuel-flow meters, have more than one engine pulling fuel from a single tank, or fuel is not replaced on a daily basis. Therefore, staff proposes to amend the Regulation to specify the approved methods for determining either the actual operating hours or the total fuel used and estimated operating hours.

If records of actual hours of operation are kept instead of fuel-use records, staff proposes that the engine must be equipped with a non-resettable hour meter. This is the only way to ensure an accurate measure of the number of hours an engine logs in a given time period.

Where daily records of fuel use and estimated hours of operation are selected, staff propose to include language in the Regulation to clarify the acceptable methods for calculating daily fuel use. In the absence of a fuel-flow meter, there are two basic methods for directly measuring engine fuel consumption: fuel purchase records or stick test. Fuel purchase records allow the owner/operator to determine the total fuel used over a period of time. The alternate method of estimating daily fuel consumption is by performing a “stick test.” This method uses a ruler or similar device placed into the fuel tank to measure the level of fuel in the tank. A stick test performed prior to and after shutdown of operations on any one day gives a measurement of the fuel consumed on that day.

Once the total amount of fuel is determined for a given time period, the daily fuel use for a single engine can be estimated. In order to accurately estimate daily fuel use, the owner/operator must record average engine operating load in addition to total hours of operation for each engine, or use default load values for different processes. The daily fuel use can then be calculated using the recorded hours and engine load data. Because operators do not generally replace fuel on a daily basis, determination of the amount of fuel used each day requires further calculation (see example calculations in issue paper included as Appendix C).

Staff proposes to amend the Regulation to specify the recordkeeping requirement based on fuel use: for both single and multiple engines connected to one fuel tank, a fuel flow meter, stick test, or fuel purchase records shall be used to quantify daily fuel consumption. If fuel purchase records or stick test is used, then the operator is required to record daily operating hours and average operating load so the data may be used in the appropriate calculation to determine daily fuel consumption.

#### **b. Reporting Requirements for Projects in State Territorial Waters**

As discussed in Chapter II Section II B.1., staff proposes that STW projects which exceed the applicable corresponding onshore district offset trigger level may operate under the Statewide Registration Program as long as the owner/operator satisfies the corresponding onshore district’s mitigation requirements. To ensure districts are aware of STW projects occurring within their jurisdiction and have time to evaluate and secure mitigation for projects that will trigger offsets, staff proposes to amend the Regulation to include a notification requirement for all STW projects.

In order to ensure districts are apprised of STW projects that may exceed their offset limits prior to those limits being surpassed, staff proposes to include language in the Regulation requiring that the owner/operator of equipment used in a STW project notify the district at least 14 days prior to commencing operation. The owner/operator of the equipment would be required to notify the corresponding onshore district in writing, via facsimile, or by telephone. The notification would include all of the following.

- The registration number of the portable engine(s) or equipment unit(s);

- The name and phone number of a contact person with information concerning the locations where the portable engine(s) or equipment unit(s) will be operated within the district;
- Estimated time the portable engine(s) or equipment unit(s) will be located in the district; and
- Estimation of actual emissions expected for the project.

## **6. Compliance Plan**

Section 2456 (f) of the Regulation allows owners/operators of registered portable engines to obtain a temporary exemption, not to exceed 18 months, from the daily and annual emission limits and recordkeeping and reporting requirements by submitting a compliance plan to replace existing engines with newly-manufactured engines or to modify the engines to meet the requirements for new engines set under Title 13 CCR or 40 CFR Part 89. For owner/operators of large numbers of engines, it takes more time to get the proper replacement parts and more resources are necessary to retrofit the engines.

In order to encourage turnover of large engine fleets, staff proposes to amend the Regulation to extend the 18-month exemption period to 24 months if 50 or more engines are to be retrofitted, and 36 months if 100 or more engines are to be retrofitted. To ensure the timely implementation of the lower emission levels agreed upon in the compliance plan, staff proposes to require the owner/operator to demonstrate measurable progress toward replacement or modification by completing 40 percent of the total number of engines per year with full replacement or modification by the end of the exemption period. The owner/operator would be required to provide the ARB Executive Officer with an annual report by March 1 for the previous calendar year. The report would include the reporting year, the number of engines replaced along with their registration numbers, and the number of engines modified along with their registration numbers.

## **7. Nonmetallic Mineral Processing Plants Subject to NSPS Subpart OOO**

The Regulation does not allow registration of sources subject to any NSPS. NSPS are promulgated by the U.S. EPA under 40 CFR Part 60. With respect to portable equipment, Subpart OOO is applicable to sand, gravel, and crushed stone portable plants with capacities greater than 150 tons per hour. Subpart OOO provides (1) rules for applicability of the standards and designation of *affected facilities*, (2) standards for particulate matter emitted from *affected facilities*, (3) monitoring, reporting, and recordkeeping requirements, and (4) test methods and procedures for determining compliance with the emissions standards. The regulatory standards limit particulate matter emissions from crushers, grinding mills, screens, bucket elevators, bagging operations, storage bins, enclosed truck and railcar loading operations, and transfer points on belt conveyors. Subpart OOO designates *affected facilities* as individual pieces of

operating equipment (e.g. screens, storage bins, crushers, etc.) manufactured, modified, or reconstructed after August 31, 1983.

Staff proposes to amend the Regulation to allow portable equipment units subject to NSPS Subpart OOO to register. HSC section 41754 (a)(2) requires the ARB, to the extent not in conflict with federal law, to preserve the most stringent district BACT requirements for portable engines and equipment units in effect January 1, 1995. Because equipment units such as rock crushing operations are considered stationary sources under federal law, provisions incorporated into the Regulation to avoid conflicts with federal NSR, Prevention of Significant Deterioration (PSD), and Title V requirements will still apply to Subpart OOO sources under the proposed amendments to the Regulation. These provisions include BACT requirements, 82 lb PM<sub>10</sub> per day and 10 tons PM<sub>10</sub> per project per year emissions limits, Ringelmann 1 opacity restriction, and notification to U.S. EPA when operating within 15 kilometers (km) of a Class I area, and would be included as conditions of registration.

Consistent with the most stringent district BACT, Subpart OOO sources eligible for registration would be subject to the requirements for sand and gravel screening, rock crushing, and pavement crushing and recycling operations listed in section 2457 (b)(3) of the proposed amended Regulation as follows.

- 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 or darker than Ringelmann 1 or equivalent 20 percent opacity;
- There shall be no visible emissions beyond the property line on which the equipment is being operated;
- 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 to ensure there are no visible emissions;
- Particulate matter emissions from each crusher shall be ducted through a fabric dust collector, or shall be equipped with a wet suppression system which maintains a minimum moisture content to ensure there are no visible emissions;
- All conveyors shall be covered, unless the material being transferred results in no visible emissions;
- All stockpiled material shall be maintained at a minimum moisture content to ensure there are no visible emissions;
- 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 fabric dust collection equipment;
- 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;
  
- Open areas and all roads subject to vehicular traffic shall be paved, watered, or chemical palatives applied to prevent to prevent fugitive emissions in excess of 20 percent opacity or Ringelmann 1; and
- If applicable, the operation shall comply with the requirements of 40 CFR Part 60

## Subpart 000.

The last requirement is proposed to incorporate all applicable provisions of 40 CFR Part 60 Subpart 000. The scope of Subpart 000 requirements applicable to a particular emission source varies from facility to facility. Rather than amend the Regulation to list all of the NSPS requirements, the incorporation intends to reference the requirements in the federal subpart. Specific Subpart 000 conditions would be included on the individual statewide registrations to aid owners/operators and the districts with compliance issues. Proposed conditions to be used on the registrations are included in the issue paper in Appendix D.

### **8. Equipment Units**

#### **a. Existing Equipment Unit Categories**

HSC section 41754 (a)(2)(A) requires ARB, to the extent not in conflict with federal law, to preserve the most stringent district BACT requirements for portable engines and equipment units in effect January 1, 1995. Since implementation of the Statewide Registration Program, additional conditions have been added to statewide registrations for the equipment unit categories specifically listed in the Regulation: (1) sand and gravel screening, rock crushing, and pavement crushing and recycling; (2) concrete batch plants; and (3) abrasive blasting. These conditions have been included to further satisfy district permit requirements representing BACT and good operating practices. Staff proposes to amend the Regulation to include these conditions for these equipment unit categories. The additional conditions are set forth in the proposed amended Regulation in Appendix A.

#### **b. New Equipment Unit Categories**

Staff proposes to register equipment units for registration if the equipment meets the “portable equipment” definition of HSC section 417514 (a)(1), meets the requirements of the Regulation, and will apply BACT for its class or category of source.

##### **i. Tub Grinders and Trommel Screens**

Under the Statewide Registration Program, staff received applications and issued registrations for tub grinders and trommel screens. Staff proposes adding tub grinders and trommel screens as a new equipment unit source category. Staff proposes to amend the Regulation to specify applicable requirements for tub grinders and trommel screens based on the most stringent district BACT. Tub grinders and trommel screens eligible for registration would be subject to the following requirements:

- There shall be no visible emissions beyond the property line on which the equipment is being operated;
- 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 or darker

- than Ringelmann 1 or equivalent 20 percent opacity; and
- Water suppression or chemical palatives shall be used to control fugitive particulate emissions from the tub grinder whenever the tub grinder is in operation, unless there are no visible emissions.

### **c. Other Equipment Unit Categories**

Staff proposes to amend the Regulation to provide that ARB can register equipment unit categories based on the most stringent district BACT in effect at the time of application. This provision is consistent with State law and provides clarification to potential applicants for the scope of the Statewide Registration Program.

## **9. Source Testing of Engines**

Portable engines share attributes of both mobile and stationary sources. Depending on a number of factors, including engine use and year of manufacture, testing requirements vary significantly for mobile and stationary engines. Emission test methods for *stationary sources* have been developed by ARB and U.S. EPA for various pollutants and for specific types of applications. The tests were designed for use in the field at stationary sources operating at maximum capacity or a representative level. In contrast, emission test methods for *on-highway engines* are not intended for field use. On-highway engine methods measure CO, hydrocarbons (HC), and NO<sub>x</sub> exclusively and require a dynamometer. A dynamometer simulates the load changes a vehicle engine experiences during normal driving conditions.

Emission testing requirements were not specified for *off-highway engines* until the promulgation of ARB's regulation for nonroad engines in 1992 (effective 1996). Typically, most off-highway engines manufactured prior to 1996 have been tested based on the 13-mode cycle on a dynamometer. The 13-mode cycle was required for on-highway engines until 1988, when the transient mode or 8-mode was instituted. Engines manufactured thereafter have been tested based on a similar 8-mode test. The modes differ based on engine speed (from idle to rated maximum) and load (from no load to 100% load). The analytical methods specified for on-highway and nonroad engines are similar to the test methods for stationary sources.

Engines meeting the State or federal emission standard could include engines certified by the U.S. EPA or ARB, on highway engines used in nonroad applications, and engines that are retrofitted to satisfy the applicable State or federal emission standard. For an engine to receive certified status for a new heavy-duty nonroad engine from either the State or the U.S. EPA, the manufacturer of the engine must satisfy a number of requirements, including providing emission data from certification engines that demonstrate compliance with the appropriate emission level. This emission test data must have been conducted in conformance with specific test procedures (the 8-mode test discussed above) and for a specified number of engines. The certification requirements for on-highway engines are similarly rigorous. An engine manufactured prior to the applicable emission standards can be retrofitted to meet the standard applicable to the engine, based on its horsepower rating. These retrofitted engines are not required to go through a

certification process to verify emission rate. However, to be exempted from the Regulation's daily and annual emission limitations, any retrofit to meet certified levels requires full certification testing.

Staff proposes to amend the Regulation so engines certified to satisfy State or federal nonroad heavy-duty diesel engine standards or engines certified to meet on-highway standards are not subject to further source testing. District compliance staff would, however, continue to inspect the certified engines to ensure they are equipped as indicated on their certification labels, and that the air pollution control equipment has not been tampered with. Staff proposes to amend the Regulation so retrofitted engines, where the retrofit kit or the engine has not undergone full certification testing, are subject to the emission limits applicable to certified engines as an enforceable condition of the registrations. These engines could be subject to an initial source test prior to registration and district staff may request source testing for compliance purposes. Any retrofit to meet certified levels would require full certification testing. Because no in-field test procedure has been developed, staff will continue to investigate the development of a testing protocol for engines in this category.

## **E. ADMINISTRATIVE PROCEDURES**

### **1. Application for Non-resident Engines**

Section 2456 (e)(7) of the Regulation requires that a non-resident engine, where the application was submitted on or after July 1, 1998, meet the most stringent emissions standards for the applicable engine size specified for California- or federally-certified newly-manufactured engines. If no emission standards exist, then the emissions requirements of Table 1 or Table 2 of the Regulation must be met.

Because staff is proposing to amend the Regulation to allow the registration of a number of new source categories, staff is proposing to amend the Regulation to extend the July 1, 1998 deadline to July 1, 2000. If the proposed amendments to the Regulation are adopted by the Board, the extended time frame will allow ample opportunity for newly eligible engines and equipment units and many previously rejected spark-ignition engines to register with the Statewide Registration Program and have ample time to meet the more stringent emission standards by January 1, 2010.

## **F. FEE STRUCTURE**

### **1. District Inspection Fee for NSPS Subpart OOO Sources**

HSC 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. Section 2461 (g) of the Regulation outlines district enforcement inspection fees. In the case of nonmetallic mineral processing plants subject to NSPS Subpart OOO which the staff is proposing to add as eligible for registration, the NSPS requirements dictate more complex provisions that would make the inspection of this type of source more complicated than other State-registered engines or equipment units. Therefore, staff proposes to amend the Regulation to add a provision to allow districts to collect a fee, in an amount to be assessed by each district, for costs associated with implementing and enforcing the requirements of 40 CFR Part 60 Subpart OOO for each registered equipment unit. This fee, however, cannot exceed the actual costs, including staff time, to the districts for implementing and enforcing the requirements. Where reasonable cause exists to believe that the equipment unit is non-compliant, the districts could charge for the actual costs, including staff time and any follow-up necessary, for conducting further investigations to resolve any violations.

## **G. INCENTIVES TO CONVERT TO CLEANER TECHNOLOGIES**

As discussed previously in this report, staff in consultation with the Workgroup is proposing to amend the 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/operators of portable engines and equipment units. This is accomplished through the requirement of BACT 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/operators of portable engines will turn-over existing engine fleets much quicker in exchange for the ability to operate with fewer restrictions.

The three major additional incentives provided in the proposed amendments to the Regulation are:

- Temporary relief (up to 24 months for 50 or more engines and up to 36 months for 100 or more engines) from daily and annual emissions limits for early voluntary replacement or modification of an existing registered engine;
- Permanent exemption from daily and annual limits for spark-ignition engines meeting the more stringent of either the non-resident emission limits of Table 2 of the proposed amended Regulation or an applicable emissions standard in effect at the time of registration; and
- Exemption from source testing requirements for certified or equivalent engines.



### **III.**

## **ECONOMIC CONSIDERATION**

### **A. INTRODUCTION**

This section discusses the economic impacts of the proposed amendments to the Regulation. The proposed amendments are not expected to change the Statewide Registration Program's overall beneficial impact on affected businesses and industry.

### **B. ECONOMIC IMPACTS OF STATEWIDE REGISTRATION PROGRAM**

#### **1. Summary of Economic Impacts**

Applicants affected by the proposed amendments to the Regulation are expected to benefit from the proposed amendments. As discussed previously, the major amendments to the Regulation include the following: allowing State-registered equipment to operate within STW and allowing additional categories of portable equipment the option of registering with the State. For the affected businesses, these proposed amendments are expected to improve the California business climate by eliminating the need for duplicative permits, allowing increased flexibility, and by reducing the costs of operation. As a result, staff expects the proposed amendments to the Regulation 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 businesses to compete.

#### **3. Businesses Affected**

The businesses that may be affected by the proposed amendments to the Regulation include a number of different industry classifications. A list of the industries staff has been able to identify is provided in Table III-1.

**Table III-1**

<b>Potential Industries Affected by Proposed Amendments to Statewide Registration Program</b>	
<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

#### **4. Analysis of Cost Impacts**

Costs associated with the proposed amendments to the Regulation can be divided into four major areas: registration and renewal fees, inspection fees for nonmetallic mineral processing plants subject to Subpart OOO, control technology costs, and costs to perform source tests. Additional costs may occur in the area of recordkeeping. However, staff believe the impact of such costs to businesses registered under the Statewide Registration Program would be negligible.

##### **a. Registration and Renewal Fees**

For portable equipment that operates within STW, much of this equipment has district permits for operations within STW and State registration for operations occurring onshore. The proposed amendments to the Regulation would allow owners of this equipment to realize cost savings by being able to operate under one program.

The owners of additional categories of portable engines and equipment units that would become eligible for Statewide registration under the proposed amendments would likely realize cost savings. 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. After three years, the yearly renewal fee under the Statewide Registration Program is \$30. For comparison purposes, based on information obtained when the Statewide Registration Program was initially proposed, 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. The total cost savings would depend upon the number of districts in which the owner has secured either permits or district registrations.

##### **b. Inspection Fees for Nonmetallic Mineral Processing Plants Subject to NSPS Subpart OOO**

The current Statewide Registration Program allows districts to collect an inspection fee of \$75 for each inspection that is performed. In the case of nonmetallic mineral processing plants subject to NSPS Subpart OOO, the NSPS dictate many additional applicable requirements that cause the inspection of a “Subpart OOO source” to be more complicated than the inspections for other types of State-registered portable engines or equipment units. Therefore, staff recommends that district inspectors be allowed to collect the actual cost for the inspection of a nonmetallic mineral processing plant subject to NSPS Subpart OOO. In all cases under the Statewide Registration Program, a district can inspect a source more often than once a year, but can only recover the cost for the inspection once each year.

**c. Control Technology Costs**

The proposed amendments to the Regulation require that engines operated on a dredge must be either replaced or retrofitted by January 1, 2005, so that the emissions are equivalent to the emissions from a certified engine. This is five years earlier than the current Regulation requires. The costs of retrofitting an existing engine with the various technologies required in the Regulation are summarized in Table III-2. 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 CCR or 40 CFR Part 89), may not be capable of being retrofitted to meet the requirements for new engines because of technological infeasibility. In this instance, the only option would be to purchase a new engine in order to remain registered under the Statewide Registration Program. Staff believes this would be a rare occurrence, especially in light of the fact that the more stringent requirements of the Regulation do not start to take effect until July 1, 2001. Businesses will retrofit or purchase a new engine if it is economically advantageous to do so, considering the annual savings and increased operational flexibility offered by the Statewide Registration Program. 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 does not have a detrimental effect on the ability of businesses to competitively operate in the State.

**Table III-2  
Estimated Costs of Retrofitting Engines\***

<b>Technology</b>	<b>Cost</b>
Injection timing retard	\$300
Throttle delay mechanism	\$400
Electronic controls	\$4,000
Turbocharger and associated engines and equipment units	\$2,400 - 9,000
Precombustion retrofit	\$300
Selective Catalytic Reduction	\$125 per horsepower

\* Based on information provided by Workgroup members.

**d. Source Testing Costs**

For new categories of portable engines and equipment units that can register under the proposed amendments to the Regulation, the State may be required to perform periodic source tests. In addition, equipment that is newly subject to Subpart OOO will be required to demonstrate compliance with the NSPS. Compliance with the NSPS is typically satisfied with an initial source test.

Source testing is a requirement of both the Statewide Registration Program and district permitting and registration programs. The costs for performing, and analyzing the results of, source tests are the same, irrespective of the program. Costs for testing and analysis typically start at a few thousand dollars and go up based on factors such 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.

Finally, staff proposes to exempt engines certified to meet either the State or federal standards for newly-manufactured nonroad engines from source testing. Districts typically require source tests for compliance purposes, and the costs of the tests are paid by the owner. By using certified engines, the owners will realize cost savings.

## **5. Potential Business Impacts**

Many businesses would potentially benefit from the proposed amendments to the Regulation. For example, businesses that have State registrations for land-based operations and district permits for water-based operations, would be able to operate on land and within STW under the auspices of State registrations. In addition, portable equipment, such as nonmetallic mineral processing plants subject to NSPS Subpart OOO, currently not eligible for Statewide registration under the Regulation, would be able to register with the State. In both cases, the Statewide Registration Program would streamline the permitting process by eliminating the need for multiple permits at the district level. Additionally, those applicants that are newly eligible for the Statewide Registration Program would no longer have the start of a project delayed because of the time needed to apply for and obtain district permits.

The Regulation does not require or mandate that owners/operators of portable engines or equipment units participate. Engines or equipment units not registered with the Statewide Registration Program are subject to district registration, permitting, or other requirements. Since State registration is voluntary, most businesses would only participate in the Statewide Registration Program if it is financially advantageous and administratively convenient.

## **6. Potential Impact on Business Competitiveness**

The proposed amendments to the Regulation are expected to have a beneficial impact on California businesses. Additional portable sources would be able to enjoy the Statewide Registration Program's benefits, such as the elimination of duplicative testing to verify the performance of engines and equipment units, elimination of conflicting requirements, and avoidance of having to obtain 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, businesses would not register engines or equipment units unless they determine registration would be beneficial as opposed to obtaining permits or registration at the district level.

## **7. Potential Impact on Employment**

The proposed amendments to the Regulation are not expected to cause a noticeable change in California employment.

## **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 amendments to the Regulation. The proposed amendments to the Regulation may benefit the affected California businesses due to streamlining the permitting process and potential decrease in permit fees.

## **9. Potential Impact on State Agencies**

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

## IV.

### AIR QUALITY CONSIDERATIONS

#### A. INTRODUCTION

This section discusses the potential air quality impacts for the proposed amendments to the Regulation. The proposed amendments covered in this section include: allowing State-registered portable engines and equipment units to operate within STW; mitigation requirements for STW projects; amending control technology requirements for engines used in dredging activities; amending the compliance plan requirements; adding daily limitations to the spark-ignition engine requirements; amending the 10 ton per year per district limit for CO to apply only in CO nonattainment districts; and allowing rock crushing operations that are subject to the NSPS Subpart OOO to register in the Statewide Registration Program.

#### B. FEDERAL PREEMPTION

Historically, districts have required operators of portable engines and portable equipment units to obtain permits prior to operation and to operate the equipment in compliance with all applicable district regulations. With the federal Clean Air Act (CAA) Amendments of 1990, U.S. EPA was authorized to regulate new nonroad 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).

The CAA preempted the districts' authority to require add-on air pollution controls or modifications to nonroad engines. The preemption affects both district regulations that affect portable engines as well as NSR program requirements (Best Available Control Technology). At the time the Statewide Registration Program was created, staff presumed that the preemption would be applicable to nonroad engines manufactured after the date the U.S. EPA adopted regulations that implemented CAA section 209(e) and that districts would continue to retain authority over portable engines manufactured prior to this date. Subsequently, U.S. EPA staff has indicated that nonroad engines refer to all engines that satisfy the definition of nonroad (See March 20, 1998 letter from Alan W. Eckert, Associate General Counsel, of U.S. EPA to Ms. Kathleen Walsh, General Counsel of the ARB, contained in Appendix E). In summary, although districts retain the authority to permit portable engines and establish in-use operational requirements (i.e., set limits on the number of hours an engine can operate or set limits on the amounts of fuel used by the engine), districts are preempted from regulating portable engines, which could have a significant impact in emissions reductions planned from this source category.

However, recognizing the special circumstances confronting California, Congress provided that the State of California (the ARB), upon receiving authorization from the U.S. EPA,

could adopt and enforce standards and regulations for portable engines.<sup>5</sup> ARB has applied for and received authority to regulate newly-manufactured nonroad engines, beginning with engines manufactured after January 1, 1996, for engines between 175 and 750 horsepower. The engine requirements of the Regulation do not affect the existing authorization granted to ARB for newly manufactured engines. ARB has applied for, but not yet received, authorization to enforce requirements applicable to engines manufactured prior to January 1, 1996. Because districts do not have authority to regulate portable engines, the engine requirements of the Statewide Registration Program clearly will result in an air quality benefit since the program would be reducing criteria pollutant emissions from portable engines.

### **C. MITIGATION OF EMISSIONS FROM STATE-REGISTERED EQUIPMENT**

Once an operator registers portable engines or portable equipment units with the State, HSC section 41753 preempts districts from permitting, registering, setting emission limits, or otherwise regulating State-registered equipment. This preemption does not affect the district's ability to require mitigation for emissions caused by portable engines and portable equipment units (See legal opinion in Appendix F). While districts cannot require mitigation from an owner/operator of State-registered engines and equipment units, districts can, however, require mitigation from the owner/operator of the stationary source for the pollutants emitted by State-registered equipment operating at the stationary source.

### **D. AIR QUALITY IMPACTS**

The following discussion compares the proposed amendments to the Regulation to district programs. Staff believes the proposed amendments are at least as stringent as district rules, as discussed below.

#### **1. State Territorial Waters**

With the exception of portable engines used in dredging, the Regulation does not currently allow the registration of any portable engine or equipment unit operating within the boundaries of the California OCS or STW. As discussed in Chapter II Section II, staff is proposing to amend the Regulation to allow any State-registered equipment to operate within STW. Types of operations that would become eligible include construction, oil and gas exploration services, and power generation. More specifically, portable engines and equipment units used for abrasive blasting, piledriving and heavy lifting within STW would be considered for registration.

The use of portable engines and equipment units in STW is not expected to change as a result of the proposed amendment to allow State-registered equipment to operate within STW. Staff anticipates that virtually all of the portable engines and portable equipment units that may seek to operate within STW under the Regulation are currently operating in California under

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<sup>5</sup> Except engines less than 175 hp used in farm and construction operations.



district authority. We believe the requirements for portable engines and portable equipment units operating under Statewide registration would be similar or more stringent than local district requirements. Appendix G contains a district-by-district discussion of the potential air quality impact of the proposed amendments to the Regulation.

## **2. Mitigation Requirements for State-Registered Equipment Operating Within State Territorial Waters**

As discussed in Chapter II Section II, the mitigation requirements proposed for State-registered equipment operating within STW are intended to be consistent with district New Source Review requirements. For State-registered portable engines that operate at a permitted stationary source, as discussed previously, districts have the authority to require mitigation. For projects that are not typically associated with a stationary source, such as offshore dredging and construction operations, staff is recommending that portable engines used in these applications be subject to the mitigation requirements of the corresponding onshore district. If the emissions from the project exceed the offset threshold of the corresponding onshore district, then the owners/operators of the portable engines used in the project would need to obtain authorization from the district. Authorization could be obtained from the district by satisfying mitigation requirements or could be in the form of a district permit. Staff believes the proposed mitigation requirements will result in the same amount of mitigation as is currently required in the districts' New Source Review programs.

## **3. Control Technology Requirements for Dredging Operations**

The Regulation requires that engines used in continuous dredging operations satisfy the equivalent emissions reduction expected from the installation of SCR. As discussed in Chapter II, Section III, staff believes the use of SCR to control NO<sub>x</sub> emissions from dredging operations has not been able to maintain 80% control efficiency without significant ammonia slip. Eighty percent reduction is equivalent to an emission limit of 130 parts per million NO<sub>x</sub> by volume. Consequently, staff is recommending that the requirements for engines used in dredging operations be amended so that SCR is no longer required for dredging operations. In lieu of the SCR requirement, staff proposes that all engines on dredges be subject to the emission control requirements contained in section 2456 of the Regulation and that these engines be subject to the retrofit requirements of the Regulation five years earlier than engines used in other activities.

When considered apart from other amendments, the proposed amendment to the Regulation to delete the SCR requirement would make the technology requirement for continuous operating dredges somewhat less stringent. Staff estimates that there are three dredges Statewide that could be affected by removal of the SCR requirement. Two dredges, currently permitted by local districts with SCR, are expected to continue operating with SCR regardless of whether the owners/operators opt for Statewide registration or remain under district permit programs. The continued use of SCR on these two dredges is effective in reducing emissions either to avoid the offset requirements of the corresponding onshore district or to allow greater operating time. The third dredge that could be affected by the removal of the requirement for SCR is a new dredge

that would be subject to the previously discussed proposed mitigation requirements, if the owner/operator of the dredge applies for State registration.

The deletion of the requirement for SCR must be considered in the context of other proposed requirements for dredge engines. In order to ensure that an air quality benefit results from the Statewide registration of dredges, staff is proposing to amend the Regulation to require all dredges registered under the proposed amended Regulation be retrofitted to certified emission levels (40 CFR Part 89 or Title 13 of CCR) by the year 2005. The early retrofit of dredge engines will result in a decrease in emissions from existing operations. Staff estimates that the retrofit requirement will result in a net NOx emission reduction of 10 tons per year. This estimate is based on 20 dredges, including two dredges currently equipped with SCR, applying for Statewide registration.

#### **4. Compliance Plan for Conversion of Engine Fleets**

The Regulation allows the owner/operator of a registered portable engine to obtain a temporary exemption, for up to 18 months, from daily and annual emission limits and recordkeeping requirements by submitting a compliance plan. The owner/operator agrees, in the compliance plan, to replace or modify existing registered engines to meet the most stringent federal or State standards set forth in CFR 40 Part 89 or Title 13 CCR for engines of that rating.

To encourage the turnover of large engine fleets to cleaner technologies, staff proposes to amend the Regulation to extend the temporary exemption from the emission limits and recordkeeping requirements. The length of the exemption would depend on the size of the engine fleet. The proposed amendment to the exemption will not affect the overall reductions expected from the Regulation. Rather, the early conversion of large fleets is expected to result in the early achievement of emission reductions.

Staff proposes that the exemption be extended if an owner or operator submits a compliance plan to convert at least 40 percent of the engines each year to meet newly manufactured certified engine emission standards (Title 13 CCR or 40 CFR Part 89) and documents progress in an annual report. This provision is expected to mitigate the potential emissions resulting from the temporary exemption from daily and annual limits. Each engine that is converted would emit, on average, about 40% less NOx emissions than an unconverted engine. For the case of an engine fleet consisting of one hundred 200 horsepower engines, emissions would be reduced by 17 percent in the first year (40 percent of the total reduction), 34 percent in the second year (80 percent of the total reduction), and full conversion would result in an emission reduction of 43 percent. Table IV-1 compares the emission reductions expected from the amended compliance plan versus the typical replacement and modification of an existing fleet for a group of one hundred 200 horsepower engines.

**Table IV-1**  
**Example of Emission Reductions Expected from Applicants Using Compliance Plan**  
**Provisions of Regulation (NOx emissions in tons per year)**

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Normal Replacement	790	773	756	740	723	706	690	673	656	640
Three-year Compliance Plan	790	656	523	456	456	456	456	456	456	456
Net Benefit	0	117	233	284	267	250	234	217	200	184

## 5. Spark-ignition Engine Requirements

The Regulation requirements for spark-ignition engines have limited the registration of these engines in the Statewide Registration Program. The proposed amendment to allow a daily emission limit in lieu of meeting a ppm<sub>dv</sub> limit or installation of a three-way catalyst would result in no impact on air quality. The proposed daily emission limits of 100 pounds per day of NO<sub>x</sub> and VOC and 550 pounds per day of CO are equivalent to emissions from a spark-ignition engine that is equipped with a three-way catalyst. The proposed daily emission limit would allow the registration of smaller spark-ignition engines, typically 100 horsepower and smaller. Spark-ignition engines of this size emit minor amounts of NO<sub>x</sub> and VOC, 13 lb/day and 26 lb/day respectively. Once these engines are registered with the Statewide Registration Program, additional emission reductions will be achieved because these engines would be subject to the Regulation's retrofit requirements.

## 6. Ten Tons per Year per District Limit for CO

The proposed amendments to the Regulation would delete the 10 ton per year per district CO emission limitation for portable engines operating in CO attainment areas. The proposed amendment would result in no impact on air quality in that, for the engines that register with the Statewide Registration Program, very few are expected to emit more than 10 tons per year of CO in any one district. In addition, the proposed change is consistent with district NSR requirements for CO emissions in nonattainment areas.

## 7. Nonmetallic Mineral Processing Plants Subject to NSPS Subpart OOO

The proposed amendments would allow portable rock crushing operations that are subject to NSPS Subpart OOO to register with the Statewide Registration Program. No additional air quality impact will result from the registration of these rock crushing operations. The rock crushing operations, would be required under the proposed amendments to the Regulation to meet the most stringent district BACT requirements, as well as the applicable NSPS Subpart OOO requirements. In addition, the daily PM<sub>10</sub> emission limit of 82 pounds per project for portable equipment units will limit the registration to smaller portable rock crushing plants. The daily limit would include all equipment that is part of the plant, including crushers, screening units,

and conveyers. The 82 pounds of PM<sub>10</sub> per project per day emission limit ensures that emissions from these operations are below district offset thresholds.

## **E. AMBIENT AIR QUALITY STANDARDS**

California Health and Safety Code section 41754 requires that the emissions from engines and equipment units registered under the Regulation shall not, in the aggregate, interfere with the attainment or maintenance of State or federal ambient air quality standards. The following discussion supports staff's expectation that emissions resulting from the proposed amendments to the Regulation would not have a significant impact on air quality.

It is not expected that there would be a significant quantity of new emissions in California as a result of the proposed amendments to the Regulation. As discussed previously, the proposed amendments would allow State-registered equipment to operate within the STW and allow some new equipment categories to be eligible for the Statewide Registration Program. The use of portable engines and equipment units for these activities in California is not expected to change because the equipment would operate under a Statewide registration rather than a district permit. Because the State retains authority to regulate portable engines through the Regulation, the State program is expected to maintain or achieve attainment with State and federal ambient air quality standards.

## **F. CEQA CONSIDERATIONS**

### **1. Summary of Environmental Impacts**

Staff has conducted an analysis of the potential environmental impacts of the proposed amendments to the Regulation. Based on our analysis, we have determined that the proposed amendments to the Regulation would not have any significant adverse environmental impacts. The proposed amendments would not effect the State Registration Program's overall 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 regulations (17 CCR sections 60005-60007) require the ARB to consider the potential adverse environmental impacts of the proposed amendments to the 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 will respond in writing to all significant environmental points raised by the public during the public review period or at the Board hearing. These responses will be contained in the Final Statement of Reasons.

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 amendments to the 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 amendments to the Regulation.

In fulfillment of the requirement for analysis of reasonably foreseeable feasible mitigation measures, staff has determined that no mitigation measures are necessary because when considered in the aggregate, we have identified no significant adverse environmental impacts associated with the proposed amendments to the Regulation. However, staff would continue to monitor implementation of the 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 amendments to the Regulation, alternatives have been studied and no realistic scenarios have been found that would serve as alternatives, given the specific mandates of the Health and Safety Code sections 41750-41755.

### **3. Emissions Reductions and Other Potential Environmental Impacts**

The Statewide Registration Program was approved by the Board on March 27, 1997, and became effective September 17, 1997. A detailed description of the amendments staff is now proposing to the Regulation is contained within Chapter II Section II. The proposed amended 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 proposed amendments to the Regulation should not result in significant increases in air pollution emissions from portable engines. The most significant proposed amendment to the Regulation is allowing State-registered engines and equipment units to operate within STW. As discussed previously, staff believes that the proposed amendments are consistent with district registration and permitting programs for portable engines. Most portable engines operating within the STW are already permitted by the districts and the subsequent State registration of this equipment will not result in changes to the operation of this equipment. When the federal preemption is considered, the Regulation clearly demonstrates a reduction in emissions as compared to the districts' limited program for regulating portable engines.

Nonetheless, the proposed amendments provide the districts ability to mitigate any emission increases resulting from State-registered equipment operating within STW.

In the ARB staff report, Proposed Regulation to Establish a Statewide Portable Equipment Registration Program, Volume II, Technical Support Document, February 1997 (1997 staff report), staff indicated that potential localized emission increases may initially occur because

the technology requirements for the Statewide Registration Program were initially less stringent than the South Coast Air Quality Management District (SCAQMD) or Ventura County Air Pollution Control District (APCD) rules. The short-term impact was based on the assessment that the Statewide Registration Program was less stringent than SCAQMD Rule 1110.2, Emissions from Gaseous- and Liquid-Fueled Engines, adopted August 3, 1990, and Ventura County APCD Rule 74.16, Oilfield Drilling Operations, adopted January 8, 1991. As discussed in Chapter II Section B of this report, the Federal Clean Air Amendments of 1990 preempts districts from specifying or enforcing control technology requirements for portable engines. Consequently, staff no longer believes that short-term adverse impacts may occur.

SCAQMD Rule 1110.2 initially required all portable engines to meet performance requirements by 1999, which would likely require owners of portable engines to retrofit the engines. Because of the federal preemption, the SCAQMD would have been unable to enforce these requirements. In addition, the SCAQMD has since modified Rule 1110.2 to exempt nonroad engines from the provisions of the rule and to revise the provisions affecting portable engines to be consistent with the technology requirements of the Regulation. Since the U.S. EPA has determined that all portable engines are considered nonroad engines, the engine requirements of the Statewide Registration Program are clearly more stringent than the requirements of Rule 1110.2.

Ventura County APCD Rule 74.16 requires that equipment used in oil field drilling operations be connected to electrical grid power. As discussed in the 1997 staff report, short-term increases in emissions from onshore drilling operations in Ventura were expected to occur because the Statewide Registration Program does not require electrification. Upon re-evaluation, staff believes that short-term adverse impacts will not occur because of the federal preemption of nonroad engines and the district's ability to require mitigation from the stationary source. Activities affected by Rule 74.16 occur at a stationary source and therefore, the district is able to require the owner/operator of the stationary source, in this case, the owner/operator of the oil field, to mitigate the emissions from State-registered engines.

Because of federal preemption of district rules for nonroad engines, staff believes that the proposed amendments to the Regulation will be at least as stringent, at all times, as district programs that affect portable engines and portable equipment units. Based upon a review of the engines registered with the State in the first year, the technology requirements of the Statewide Registration Program have resulted in an additional reduction of over 60 tons/year of NO<sub>x</sub> above the reductions achieved by the SCAQMD's program for portable engines. A discussion of how the emission reductions were determined is described in Appendix I.

#### **b. Portable Equipment Units**

For portable equipment units, staff proposes to allow rock crushing-type operations subject to NSPS Subpart OOO to register under the Statewide Registration Program. Portable equipment units would be required under the proposed amended Regulation to meet the most stringent district BACT requirements, as well as the requirements of the NSPS. The Regulation's

82 pounds of PM<sub>10</sub> per project per day project limitation will limit the registration to smaller portable rock crushing plants. Accordingly, staff does not expect any emission increase from this equipment to occur because of registration in the Statewide Registration Program. As discussed previously, units this small typically do not trigger district offset requirements.

## APPENDICES

- A. Proposed amended Regulation to Establish a Statewide Portable Equipment Registration Program
- B. U.S. EPA Letter re: Delegation under 40 CFR Part 55
- C. Engine Daily Fuel Use Determination Issue Paper
- D. Nonmetallic Mineral Processing Plants Subject to NSPS Subpart OOO Issue Paper
- E. March 20, 1998 Letter from Mr. Alan W. Eckert to Ms. Kathleen Walsh
- F. Air Resources Board Memorandum re: District Authority to Require Offsets for Portable Equipment
- G. Air Quality Impact from State-Registered Equipment Operating Within State Territorial Waters
- H. District Criteria Pollutant Offset Trigger Levels
- I. Emission Reductions Resulting from the Statewide Registration Program
- J. References



**Appendix A:**

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

**Regulations to Establish a  
Statewide Portable Equipment Registration Program  
(As Adopted March 27, 1997, with Amendments)**  
California Air Resources Board

Article 5 and sections 2450 - 2465, Title 13, California Code of Regulations

(Note: Proposed amendments to the regulations are identified below. Underline is used to indicate the proposed additions. ~~Strikeout~~ is used to indicate proposed deletions from the regulation text.)

## Article 5. Portable Engine and Equipment Registration

### § 2450. Purpose.

~~This~~These regulations 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~~These regulations preempts districts from permitting, registering, or regulating portable engines and equipment units registered with the Executive Officer of the Air Resources Board except in the circumstances specified in the regulations.

NOTE: Authority cited: Section 39600-39601, 41752-41755, 43013(b), and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

### § 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 as defined in section 2452. Except as provided in paragraph (c) of this section, 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 and unconfined abrasive blasting, Portland concrete batch plants, sand and gravel screening, rock crushing, and unheated pavement recycling and crushing operations;
  - (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 [42 U.S.C. 7543 (e)(1)], California is preempted from establishing emission standards or other requirements related to the control of emissions (other than in-use operational controls) for new 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 brake horsepower used in construction operations because ~~as stated in section (c)(2) below~~; California law exempts agricultural operations from permit and registration programs as stated in section (c)(2) below. Accordingly, references to the federal preemptions as they apply to this regulation will refer to requirements ~~to~~for construction equipment using engines less than 175 brake horsepower.

See *Engine Manufacturers Association v. EPA*; (88 F.3d 1075 [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 Manufactures Association*, (supra). To date, ARB has ~~to date~~ received authorization for regulations covered in Title 13, California Code of Regulations 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 (~~wx~~) 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 Standard~~ or Maximum Achievable Control Technology standard, or National Emissions Standard for Hazardous Air Pollutants, or federal New Source Performance Standard, except for equipment units subject to 40 CFR Part 60 Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants); and
- (6) any portable engine or equipment unit operating within the boundaries of the California Outer Continental Shelf (OCS) ~~and State Territorial Waters~~. [Note: This shall not prevent statewide registration of engines and equipment units already permitted by a district for operation in the OCS. Such statewide registration shall only be valid for operation onshore and in State Territorial Waters (STW).]
- (7) any dredging operation in the Santa Barbara Harbor;
- (8) any dredging unit owned by a single port authority, harbor district, or similar agency in control of a harbor, and operated only within the same harbor; and
- (9) any equipment unit operating at a given location which by virtue of the

activity being performed results in the emission of hazardous air pollutants as determined by the Executive Officer on a case-by-case basis (e.g., rock crushing plant operating in a serpentine quarry).

- (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 brake horsepower or greater that are located in a district having a permit or registration program that establishes emission standards or emission limits applicable to portable engines, and the Executive Officer has determined that the district program has been preempted by federal law.
- (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. An owner or operator of portable engines that are required to register pursuant to this section may elect to use existing daily and annual emission limit permit conditions of the district in which the portable engine is to be operated, in place of the daily and annual requirements of this regulation. Any daily and hourly emission limits of a district that are used in lieu of this regulation's limits are only valid during operation in that district. If the engine is operated in a district that previously did not have a permit program, the daily and annual requirements of this regulation will apply. All other requirements of this regulation are applicable to the portable engine.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 2452. Definitions.

- (a) **Air Contaminant** means any discharge, release, or other propagation into the atmosphere which 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) **Corresponding Onshore District** means the district which has jurisdiction for the onshore area that is geographically closest to the engine or equipment unit.

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- (de) **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.
- (ef) **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 threatens 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.
- (fg) **Engine** means any piston driven internal combustion engine.
- (gh) **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).
- (hi) **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;
  - (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.
- (ij) **Executive Officer** means the Executive Officer of the California Air Resources Board or his designee.
- (jk) **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.
- (kl) **Hazardous Air Pollutant (HAP)** means any air contaminant that is listed pursuant to section 112(b) of the federal Clean Air Act.
- (lm) **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~~article.
- (mn) **Location** means any single site at a building, structure, facility, or installation.
- (no) **Maximum Achievable Control Technology (MACT)** means any federal requirements promulgated as part of 40 CFR Parts 61 and 63.
- (op) **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.

- (pq) **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~~If 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 ~~it's~~its functional purposes. The term "ultimate purchaser" means, with respect to a new nonroad engine, the first person who in good faith purchases a new nonroad vehicle or a new nonroad engine for purposes other than resale.
- (t) **New Source Performance Standard** means any federal requirement 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 California 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) **Outer Continental Shelf (OCS)** shall have the meaning provided by section 2 of the Outer Continental Shelf Lands Act (43 U.S.C. Section 1331 et seq.).

(wx) **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.

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

- (~~xy~~) **Prevention of Significant Deterioration (PSD)** means any federal requirements promulgated as part of 40 CFR Part 52.
- (~~yz~~) **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 rating, is used in the farm and construction industries.
- (~~z~~aa) **Process** means any air-contaminant-emitting activity associated with the operation of a portable engine.

(aabb) **Project, for the purposes of onshore operation**, means the use of 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.

(cc) **Project, for the purposes of State Territorial Waters (STW)**, means the use of one or more registered portable engines and equipment units operating under the same or common ownership or control to perform any and all activities needed to fulfill specified contract work that is performed in STW. For the purposes of this definition, a contract means verbal or written commitments covering all operations necessary to complete construction, exploration, maintenance, or other work. Multiple or consecutive contracts may be considered one project if they are intended to perform activities in the same general area, the same parties are involved in the contracts, or the time period specified in the contracts is determined by the Executive Officer to be sequential.

(bbdd) **Registration** means issuance of a certificate by the Executive Officer acknowledging expected compliance with the applicable requirements of this regulation article, and the intent by the owner or operator to operate said portable engine or equipment unit within the requirements established by this regulation article as it pertains to portable engines and equipment units.

(ccce) **Rental Business** means a business wherein which 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.

(ddff) **Renter** is means a person who rents a portable engine or equipment unit from a rental business.

(eeegg) **Resident Engine** is means:

- (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 and an application for registration is submitted to the Executive Officer on or before July 1, 2001~~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 July 1, 2000~~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~~
- (34) a portable engine where registration becomes mandatory pursuant to section 2451 (d) of this regulation~~article~~.

[Note: 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.]

(hh) **State Territorial Waters (STW)** includes all of the following: an expanse of water that extends from the California coastline to 3 miles off-shore; a 3 mile wide belt around islands; and estuaries, rivers, and other inland waterways.

(ffi) **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.

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

~~(jj)~~ **Stick Test** means the process whereby a ruler or similar device is inserted perpendicular to the bottom of the fuel tank. From the wetted length of the ruler, the amount of fuel remaining in a tank of known dimensions can be calculated.

~~(gk)~~ **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.

(ll) **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.

~~(hhmm)~~ **Transportable** means the same as portable.

~~(iinn)~~ **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).

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

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 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 (~~wx~~) of this regulation and meet all applicable requirements established in this ~~regulation~~article.
- ~~(b) For purposes of registration under this article, a portable engine and the equipment unit it serves are considered to be separate emissions units and require separate applications.~~
- ~~(bc)~~ For an identical replacement, 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~~ regulation shall subject the owner or operator to section 2465.
- ~~(ed)~~ For an equivalent replacement, Except for TSE, the owner or operator of a registered portable engine or equipment unit shall file a new application for registration; with the Executive Officer prior to operating the equivalent replacement. The application shall include including the surrender of the registration ~~certificate~~ identification label 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 the 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 on or before June 1, 2000~~within one year after [the effective date of this regulation];~~ and
  - (2) within 30 days of receipt of an application, for applications received after June 1, 2000~~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 on or before June 1, 2000~~within one year after the effective date of this regulation;~~ and
  - (2) within 90 days of receipt of an application, for applications received after June 1, 2000~~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 label shall be affixed on the registered portable engine or equipment unit at all times, and the registration certificate shall be kept on the immediate premises with the portable engine or equipment at all times and made accessible to the Executive Officer or districts upon request. 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~~ July 1, 2001, or other proof of California residency as described in section 2452 (~~egg~~); and
  - (8) the signature of the ~~responsible official~~, person authorized to act on behalf of the applicant 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~~ person authorized to act on behalf of the applicant 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 a 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, except:

(1) for valid district permits or registrations issued for portable engines or equipment units used in a project(s) operating in the OCS. The requirements of the district permit or registration apply to the registered portable engine or equipment unit while operating at the project(s) in the OCS; or

(2) for valid district permits or registrations issued for portable engines or equipment units used in a project(s) operating in both the OCS and STW. The requirements of the district permit or registration apply to the registered portable engine or equipment unit while operating at the project(s) in the OCS and STW; or

(3) at STW project(s) that trigger district emission offset thresholds; or

(4) at any specific location where statewide registration is not valid. The portable engine or equipment unit may obtain a district permit or registration for the location(s) where the statewide registration is not valid.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 2454. Registration Process.

- (a) The Executive Officer shall make registration data available to the 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 the 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).

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 2455. General Requirements.

- (a) The emissions from portable engines or equipment units registered under this ~~regulation~~ article shall not, in the aggregate, interfere with the attainment or maintenance of California or federal ambient air quality standards. 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~~ article.
- (b) Portable engines or equipment units registered under this ~~regulation~~ article 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 (~~ef~~) of this article, is considered registered under the requirements of this ~~regulation~~ article 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 a registered portable equipment unit must notify the U.S. EPA and comply with 40 CFR 52.21 if:
- (1) the portable equipment unit ~~is part of~~operates at a facility defined as a major source under 40 CFR 51.166 or 52.21, and
    - (A) the facility is located within 10 kilometers of a Class I area; or
    - (B) the portable equipment unit, operating in conjunction with other registered portable equipment units, ~~is part of~~operates at the stationary source and its operation would be defined as a major modification to the stationary source under 40 CFR 51.166 or 52.21; or
  - (2) the portable equipment unit, operating in conjunction with other registered portable equipment units, would be defined as a major stationary source, as defined under 40 CFR 51.166 or 52.21.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

#### § 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~~ Ringelmann 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~~ Ringelmann Chart. No other requirements of this section are applicable to TSE.
- (b) A new nonroad engine rated less than 175 brake horsepower 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 (j) 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 brake horsepower shall comply with the most stringent requirements, if any, for its horsepower rating and year of manufacture set forth in 40 CFR Part 89 or Title 13, California Code of Regulations. If no emission standards exist for that brake 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 (tj) of this article. No other requirements of this section are applicable to portable engines rated less than 50 brake horsepower.
- (e) Portable engines registered under this ~~regulation~~article shall:
- (1) comply with the applicable daily and annual emission limits contained in section 2456 (tj) 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 percent CO<sub>2</sub>;
  - (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 ~~Ringelmann~~ Ringelmann 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, if registering on or after July 1, ~~1998~~2000, meet the most stringent emissions standards for the applicable brake horsepower range specified for California- 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 identical replacement of a registered portable engine, meet the most stringent emissions standard; ~~and~~

- (9) after January 1, 2010, ~~any registered portable engine~~ if rated 50 brake horsepower or above and not previously meeting a federal or California standard pursuant to 40 CFR 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); and
- (10) 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 40 CFR Part 89 shall apply. If no standard exists under the California Code of Regulations or 40 CFR 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, except as provided in section 2456 (g), from daily and annual emission limits, and recordkeeping and reporting requirements, 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 to modify the existing portable engine to satisfy the requirements that have been set for new engines under 40 CFR Part 89 or Title 13 of the California Code of Regulations or for spark-ignition engines that satisfy the more stringent of either an applicable emissions standard in effect at the time of application or the applicable emissions standard set forth in Table 2 of this regulation for nonresident engines. 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~~ person authorized to act on behalf of the applicant and date of the signature.

[Note: 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~~ the applicable time frame allowed. 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) At the discretion of the Executive Officer, the temporary exemption of section 2456 (f) may be increased to 24 months for applications to replace or modify 50 or more engines and 36 months for applications to replace or modify 100 or more engines. In order to keep the 24 month or 36 month temporary exemption, the owner or operator must demonstrate measurable progress toward replacement or modification. Measurable progress shall be defined as 40 percent of the total number of engines replaced or modified each year reaching full replacement or modification by the end of the exemption period. As proof of measurable progress, the owner or operator shall provide the Executive Officer an annual report, within 60 days after the end of each calendar year, to include the reporting year, the number of engines replaced along with their registration numbers, and the number of engines modified along with their registration numbers.

(gh) 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 fuel flow meters ~~an alternate method, as approved by the Executive Officer~~, for purposes of complying with the requirements of section 2458.

(hi) Subject to Executive Officer approval, 4-degree injection timing retard is not required for compression-ignition engines if it can be demonstrated that such modification is technologically infeasible, may cause potential engine damage, or cause an exceedance of a pollutant standard (e.g., opacity limit). The Executive Officer shall consider appropriate documentation, including, but not limited to: cost effectiveness studies or engineering analyses. The Executive Officer may grant exemptions or require reduced injection timing (e.g., 3-, 2- or 1-degree) as determined appropriate on a case-by-case basis, for specific identical engines of the

same make, model, model-year, and configuration.

(ij) 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 (PM<sub>10</sub>);
- (3) for registered portable engines operating onshore, 10 tons for each pollutant per district per year per engine for NO<sub>x</sub>, SO<sub>x</sub>, VOC, PM<sub>10</sub>, and CO in nonattainment areas;
- (4) for registered portable engines operating within STW, the offset requirements of the corresponding onshore district apply. Authorization from the corresponding onshore district is required prior to operating within STW above the district offset trigger levels. If authorization is in the form of an existing district permit, the terms and conditions of the district permit supercede the requirements for the project, except that the most stringent of the technology and emission concentration limits required by the district permit or statewide registration are applicable. If the portable engine does not have an existing district permit, the terms and conditions of the statewide registration apply, and the corresponding onshore district may require offsets pursuant to district rules and regulations. The requirement for district offsets shall not apply to the owner/operator of a state registered engine(s) when the engine(s) is operated at a stationary source permitted by the district;
- (45) for resident engines operating in the South Coast Air Quality Management District (SCAQMD), 100 pounds nitrogen oxides (NO<sub>x</sub>) per project per day [An owner may substitute SCAQMD permit or registration limits in effect on or before the effective date of this regulation September 17, 1997 (optional)];
- (56) for nonresident engines, 100 pounds NO<sub>x</sub> per engine per day in all districts, except in SCAQMD where the limit is 100 pounds NO<sub>x</sub> per project per day; and
- (67) in lieu of (45) and (56) above, operation of a new nonroad engine rated at 750 brake horsepower or greater for which a federal or California standard pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations has not yet become effective, shall not exceed 12 hours per day.
- (8) for engines that operate in both STW and onshore, the 10 tons per district per year per engine limit in (3) above shall only apply onshore.
- (9) {A portable engine meeting an applicable emissions standard, as set forth in Title 13 of the California Code of Regulations, 40 CFR Part 89, or for spark-ignition engines that meet the more stringent of either an applicable emissions standard in effect at the time of application or the applicable emissions standard set forth in Table 2 of this regulation for nonresident

engines, is exempt from the daily and annual emission limits specified above.}]

(jk) Portable engines operated on a dredge shall be subject to the emission controls and limits as follows: ~~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<sub>x</sub> emissions equal to or less than 130 parts per million dry volume corrected to 15 percent oxygen averaged over 15 minutes (1.7 grams per brake horsepower-hour). 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.~~

(1) for resident dredge engines, meet section 2456 (e) requirements;

(2) for non-resident dredge engines, meet the most stringent emissions standards for the applicable brake horsepower range specified for California- or federally-certified newly-manufactured engines pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations; and

(3) for all engines operated on a dredge, meet the most stringent emission standard pursuant to 40 CFR Part 89 or Title 13 of the California Code of Regulations by January 1, 2005.

(kl) 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.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.



Table 1 Compression-ignition Engine Requirements\*

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

\*\* For the purpose of compliance with this article, ppm<sub>dv</sub> is parts per million NO<sub>x</sub> as NO<sub>2</sub> @ 15 percent oxygen averaged over 15 consecutive minutes. Limits of ppm<sub>dv</sub> 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 hi)

Table 2 Spark-ignition Engine Requirements\*

Engine Status	Pollutant Emission Limits or Control Technology		
	NO <sub>x</sub> **	VOC**	CO**
Resident	213 ppm <sub>dv</sub> NO <sub>x</sub> (4.0 g/bhp-hr)**  or <u>three-way catalyst</u> ***  or <u>100 lbs/day</u>	800 ppm <sub>dv</sub> VOC (5.0 g/bhp-hr)  or <u>three-way catalyst</u> ***  or <u>100 lbs/day</u>	<del>25,344 ppm<sub>dv</sub> CO (288 g/bhp-hr)*</del> <u>17,600 ppm<sub>dv</sub> CO (200 g/bhp-hr)*</u>  or <u>three-way catalyst</u> ***  or <u>550 lbs/day</u>
Non-Resident	80 ppm <sub>dv</sub> NO <sub>x</sub> (1.5 g/bhp-hr)**	240 ppm <sub>dv</sub> VOC (1.5 g/bhp-hr)	176 ppm <sub>dv</sub> 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<sub>dv</sub> is parts per million NO<sub>x</sub> as NO<sub>2</sub> @ 15 percent oxygen averaged over 15 consecutive minutes. Limits of ppm<sub>dv</sub> are the approximate equivalent to the stated grams per brake horsepower hour limit based on assuming the engine is 35 percent efficient.

\*\*\* The three-way catalyst must provide a minimum of 80 percent control of NO<sub>x</sub> and CO, and a minimum of 50 percent control of VOC.

\* At the request of the Executive Officer, CO modeling may be required to demonstrate compliance with ambient air quality standards.

§ 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 pounds per project per day of PM<sub>10</sub>.
  - (3) For registered equipment units that operate within STW and onshore, emissions released while operating both in STW and onshore shall be included toward the 10 tons per year limit.
- 
- (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~~ Ringelmann 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; ~~and~~
    - (E) there shall be no visible emissions beyond the property line on which the equipment is being operated.
  - (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~~ Ringelmann 1 or equivalent 20 percent opacity;

- (E) open areas and all roads subject to vehicular traffic shall be paved, watered, or chemical palatives applied ~~maintained adequately wet~~ to prevent fugitive emissions in excess of 20 percent opacity or ~~Ringlemann~~ Ringelmann 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 fabric 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;
- (I) all transfer points shall be equipped with a wet suppression system to control fugitive particulate emissions unless there are no visible emissions;
- (J) all conveyors shall be covered, unless the material being transferred results in no visible emissions;
- (K) wet suppression shall be used on all stockpiled material to control fugitive particulate emissions, unless the stockpiled material results in no visible emissions; and
- (L) there shall be no visible emissions beyond the property line on which the equipment is being operated.

(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~~ Ringelmann 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 to ensure there are no visible emissions ~~of 4 percent by weight~~;
- (D) particulate matter emissions from each crusher shall be ducted through a fabric dust collector, or shall be equipped with a wet suppression system which maintains a minimum moisture content to ensure there are no visible emissions ~~of 4 percent by weight~~;

- (E) all conveyors shall be covered, unless the material being transferred ~~does not result in any results in no~~ visible particulate matter emissions;
- (F) all stockpiled material shall be maintained at a minimum moisture content ~~to ensure there are no visible emissions 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 fabric 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;
- (I) open areas and all roads subject to vehicular traffic shall be paved, watered, or chemical palatives applied to prevent fugitive emissions in excess of 20 percent opacity or Ringelmann 1; and
- (J) if applicable, the operation shall comply with the requirements of 40 CFR Part 60 Subpart OOO.

(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 ~~Ringelmann~~ Ringelmann 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; ~~and~~
- (F) there shall be no visible emissions beyond the property line on which the equipment is being operated.

(5) Tub grinders and trommel screens:

- (A) there shall be no visible emissions beyond the property line on which the equipment is being operated;
- (B) 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 or darker than Ringelmann 1 or equivalent  
20 percent opacity;

(C) water suppression or chemical palatives shall be used to control  
fugitive particulate emissions from the tub grinder whenever the  
tub grinder is in operation, unless there are no visible emissions.

(c) Portable equipment units not described in section 2457 (b) above, shall be subject  
to the most stringent district Best Available Control Technology (BACT)  
requirements in effect for that category of source at the time of application for  
registration.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018,  
Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 2458. Recordkeeping and Reporting.

(a) Any registered portable engine, except for engines operating in STW, that meets  
one of the following criteria is exempt from the requirements of this section: an  
applicable emissions standard as set forth in Title 13 of the California Code of  
Regulations or 40 CFR Part 89, including registered portable engines having  
obtained a temporary exemption pursuant to section 2456 (f) of this regulation, is  
exempt from the requirements of this section.

(1) an applicable emissions standard as set forth in Title 13 of the California  
Code of Regulations or 40 CFR Part 89; or

(2) the requirements for a temporary exemption pursuant to sections 2456 (f)  
or (g) of this article; or

(3) for spark-ignition engines, the more stringent of an applicable emissions  
standard in effect at the time of application or set forth in Table 2 of this  
regulation for nonresident engines.

(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 equipment units, the total process weight or throughput; and~~
- ~~(45) 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.~~

~~(A) If recordkeeping of actual hours of operation is kept instead of fuel use records, then the engine shall be equipped with an operational and properly maintained non-resettable hour meter.~~

~~(B) Daily fuel consumption must be measured either by fuel flow meter, fuel tank stick test, or by fuel purchase records. If fuel purchase records or a stick test is used, the operator must record the average operating load of the engine or use the approved operating load default factors, and the calculation approved by the Executive Officer to determine the daily fuel use for the engine. The stick test must be performed prior to the start of and after the shutdown of operations on any given day to determine the amount of fuel used on that day. For an engine that operates on a 24-hour basis, the stick test must be performed once at the same time each day of uninterrupted operation, and then compared to the previous day's test to calculate daily fuel use.~~

- ~~(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~~ article, 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 an annual report, 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 an annual report, in a format approved by the Executive Officer, within 60 days after the end of each calendar year; to include 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 in the number 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.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 2459. Notification.

- (a) ~~Except as listed in sub-section (f) of this section, if~~ a registered portable engine or equipment unit will be in a district for more than five days, the owner/ or operator or renter (except as noted in (c) below), 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~~ commencing operations in that 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 renter (except as noted in (c) below), 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) Except as listed in sub-section (f) of this section, Owners and operators of registered portable engines rated less than 200 brake horsepower 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) Except as listed in sub-section (f) of this section, 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.
- (f) For STW projects, the owner and/or operator of such equipment must notify the corresponding onshore district in writing, via facsimile, or by telephone, at least 14 days in advance of commencing operations in that district. The notification shall include all of the following:
  - (1) the registration number of the portable engine(s) or equipment unit(s);
  - (2) the name and phone number of a contact person with information concerning the locations where the portable engine(s) or equipment unit(s) will be operated within the district;
  - (3) estimated time the portable engine(s) or equipment unit(s) will be located in the district; and
  - (4) estimation of actual emissions expected for the project.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.



§ 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 owner's expense, in order to verify information submitted in the application except as provided in section 2460 (d).
- (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 as provided in section 2460 (d), unless 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

- (d) Initial or follow-up source testing of engines to verify compliance with the requirements of this regulation shall not be required for the following:

- (1) engines certified to satisfy the most stringent emissions standards for the applicable horsepower range specified for State or federal newly-manufactured engines pursuant to Title 13 of the California Code of Regulations or 40 CFR Part 89; or
- (2) engines certified to meet the most stringent emissions standards for the applicable horsepower range specified for State or federal on-highway engines pursuant to Title 13 of the California Code of Regulations; or
- (3) engines that are retrofitted to meet the most stringent emissions standards for the applicable horsepower range specified for State or federal newly-manufactured engines pursuant to Title 13 of the California Code of

Regulations or 40 CFR Part 89, where the retrofit kit has undergone testing consistent with the applicable certification procedures.

- (e) The exemption provided in section 2460 (d) shall not apply to source testing of engines for compliance purposes where evidence of engine tampering, lack of proper engine maintenance, or other problems or operating conditions that could affect engine emissions are identified.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 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.
- (l) In lieu of section 2461 (g) above, a district may collect a fee, in an amount to be assessed by the district, for costs associated with implementing and enforcing the requirements of 40 CFR Part 60 Subpart OOO for each registered equipment unit subject to Subpart OOO. In no event shall the fee assessed exceed the actual costs, including staff time, to the district for implementing and enforcing Subpart OOO. If for reasonable cause, the district performs an inspection leading to determination of non-compliance with this article, or any applicable state or federal requirements, the district may charge a fee per portable 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.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

**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~~When 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~~ by September 17, 1998, 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.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 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.

NOTE: Authority cited: Section 39600-39601, 41752-41755, 43013(b), and 43018 of the Health and Safety Code. Reference: Section 41750-41755 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 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.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

§ 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~~in the article and in the referenced sections of the California Health and Safety Code.

NOTE: Authority cited: Sections 39600-39601, 41752-41755, 43013(b) and 43018, Health and Safety Code. Reference: Sections 41750-41755, Health and Safety Code.

**Appendix B:**

**U.S. EPA LETTER RE: DELEGATION UNDER 40 CFR PART 55**

**Appendix C:**

**ENGINE DAILY FUEL USE DETERMINATION ISSUE PAPER**

## Appendix C

### ENGINE DAILY FUEL USE DETERMINATION ISSUE PAPER

#### PERP Workgroup Issue Paper

***Issue*** For record keeping of the actual daily hours of operation and the fuel consumed on a daily basis, the approvable methods of determining actual operating hours and daily fuel use need to be identified.

#### Background:

The statewide program requires that operators maintain records of either actual daily operating hours, or daily fuel use in conjunction with an estimate of the daily hours for each registered engine. If record keeping of daily fuel use is chosen, registered operators may experience difficulty in determining the actual daily fuel use for individual engines because most engines are not equipped with fuel flow meters, more than one engine may be pulling fuel from a single tank, or fuel is not replaced on a daily basis.

#### Discussion:

In the absence of a fuel meter, there are basically two ways of directly measuring fuel consumption. Overall fuel use can be determined by keeping records of the fuel purchased. Since fuel is generally not replaced on a daily basis, the determination of actual fuel used each day requires further calculation. An alternate method of estimating daily fuel consumption is by performing a “stick test”. This method uses a ruler or similar device that is placed into the fuel tank to measure the level of fuel in the tank. A stick test performed prior to and after shutdown of operations on any one day should reveal how much fuel was consumed on that day. Once the total amount of fuel has been determined for a given time period, the daily fuel use for a single engine can be estimated using the following calculations. In order to accurately estimate daily fuel use, it is required that the operator be aware of and record average operating load in addition to total hours of operation for each engine, or default load values for different processes can be used. The daily fuel use can then be calculated by the registered company at a later date using the recorded hours and engine load data.

**Example 1:** A single engine connected to one tank that operates under variable load and different hours per day, and consumes 100 gallons over 3 days as determined by fuel purchase:

$F_c = 100$  gallons (over 3 days)

$H_1 = 10$  hours (day one),       $L_1 = 50\%$  load (day one)

$H_2 = 8$  hours (day two),       $L_2 = 60\%$  load (day two)

$H_3 = 7$  hours (day three),       $L_3 = 80\%$  load (day three)

$$\text{Fuel consumed on day 1} = \frac{(H1 \times L1) \times Fc}{(H1 \times L1) + (H2 \times L2) + (H3 \times L3)}$$

$$\begin{aligned} \text{Fuel consumed on day 1} &= \frac{(10 \times 0.5) \times 100 \text{ gallons}}{(10 \times 0.5) + (8 \times 0.6) + (7 \times 0.8)} \\ &= \frac{500}{15.4} \\ &= 32.5 \text{ gallons} \end{aligned}$$

Fuel consumed on day 2 = 31.2 gallons

Fuel consumed on day 3 = 36.3 gallons

**Example 2:** Three engines of different horsepower ratings, connected to one tank, operated under different loads for different hours per day, and consumed 250 gallons in one day as determined by stick test.

Fc = 250 gallons

R1 = 150 bhp, H1 = 12 hours, L1 = 80% load

R2 = 300 bhp, H2 = 10 hours, L2 = 50% load

R3 = 500 bhp, H3 = 10 hours, L3 = 50% load

$$\text{Fuel consumed for engine 1} = \frac{(R1 \times H1 \times L1) \times Fc}{(R1 \times H1 \times L1) + (R2 \times H2 \times L2) + (R3 \times H3 \times L3)}$$

$$\begin{aligned} \text{Fuel consumed for engine 1} &= \frac{(150 \times 12 \times 0.8) \times 250 \text{ gallons}}{(150 \times 12 \times 0.8) + (300 \times 10 \times 0.5) + (500 \times 10 \times 0.5)} \\ &= \frac{360000}{5440} \\ &= 66.2 \text{ gallons} \end{aligned}$$

Fuel consumed for engine 2 = 68.9 gallons

Fuel consumed for engine 3 = 114.9 gallons

**Example 3:** Three engines of different horsepower ratings, connected to one tank, operated under different loads for different hours per day, and consumed 700 gallons in one day as determined by fuel purchase records.

Fc = 700 gallons

Engine 1: R1 = 150 bhp, H1a = 8 hours, H1b = 12 hours, H1c = 9 hours, L1 = 80% load

Engine 2: R2 = 300 bhp, H2a = 8 hours, H2b = 10 hours, H2c = 12 hours, L2 = 50% load

Engine 3: R3 = 500 bhp, H3a = 10 hours, H3b = 10 hours, H3c = 12 hours, L3 = 50% load

Where H1a = hours of operation for engine 1 on first day.

T1 = H1a + H1b + H1c (sum of operating hours for engine 1 over entire period)

T1 = 29 hours

$$\text{Fuel consumed for engine 1 for day 1} = \frac{\{R1 \times T1 \times Fc\} \times H1a}{[(R1 \times T1 \times L1) + (R2 \times T2 \times L2) + (R3 \times T3 \times L3)] \times T1}$$

$$\text{Fuel consumed for engine 1 for day 1} = \frac{\{(150 \times 29 \times 0.8) \times 700 \text{ gallons}\} \times 8 \text{ hours}}{[(150 \times 29 \times 0.8) + (300 \times 30 \times 0.5) + (500 \times 32 \times 0.5)] \times 29 \text{ hours}}$$

$$= \frac{19488000}{463420}$$

$$= 42.1 \text{ gallons}$$

Recommendation:

ARB staff recommends that the fuel use record keeping requirement specify that for both single and multiple engines connected to one tank, either a fuel meter, fuel tank stick test, or fuel purchase records must be used to quantify daily fuel consumption. If fuel purchase records or a stick test is to be used, then the operator must record daily operating hours and average operating load in order that they may be used in the appropriate calculation to determine fuel consumption on a daily basis. Default load values, as developed by the workgroup, may be used instead of operator records of engine load. If records of actual hours of operation are to be kept instead of fuel use records, the engine must be equipped with an hour meter.

Proposed Regulation Language:

**Section 2452 - Definitions**

“Stick Test”: The process where by a ruler or similar device is inserted perpendicularly to the bottom of the fuel tank. From the wetted length of the ruler, the amount of fuel remaining in a tank of known dimensions can be calculated.

**Section 2458(b) - Recordkeeping and Reporting**

(4A) If record keeping of actual hours of operation is kept instead of fuel use records, then the engine shall be equipped with an operational and properly maintained non-resettable hour meter or an alternate method, as approved by the Executive Officer.

(4B) Daily fuel consumption must be measured either by fuel flow meters, fuel tank stick test, or by fuel purchase records. If fuel purchase records or stick tests are to be used, the operator must record the average operating load of the engine or use the approved default factors, and the calculation approved by the Executive Officer must be used by the registered company to determine the daily fuel use for the engine. If used, the stick test must be performed prior to the start of and after the shutdown of operations on any given day to determine the amount of fuel used on that day. For engines that operate on a 24-hour basis, the test must be performed once at the same time each day of uninterrupted operation, and then compared to the previous day’s test to calculate daily fuel use.



**Appendix D:**

**NONMETALLIC MINERAL PROCESSING PLANTS SUBJECT TO  
NSPS SUBPART OOO ISSUE PAPER**

## Appendix D

### NONMETALLIC MINERAL PROCESSING PLANTS SUBJECT TO NSPS SUBPART OOO ISSUE PAPER

#### PERP Workgroup Issue Paper

***Issue*** *Expand the associated equipment category to allow registration of sand and gravel screening, rock crushing, and pavement crushing and recycling operations subject to federal New Source Performance Standards (NSPS) promulgated in 40 CFR Part 60 Subpart OOO.*

#### Background

The Statewide Portable Equipment Registration Program Regulation (Regulation) currently excludes equipment units subject to federal NSPS. Due to the transient nature of rock crushing type operations, industry representative requested that the Regulation be amended so equipment units triggering federal Subpart OOO requirements are allowed to register.

EPA expressed concern over inclusion of Subpart OOO sources in the State registration program due to issues involving delegation of authority. Based on federal law, EPA is responsible for enforcing NSPS provisions that have not been delegated to state or local agencies.

#### Recommendation

ARB staff recommends expanding the associated equipment category to include registration of equipment units subject to Subpart OOO.

Although HSC 41755 states that districts shall enforce the statewide registration program, ARB does not propose to change the current enforcement of federal NSPS for Subpart OOO sources, aside from supervision of performance testing and tracking of equipment reconstructions or modifications. Local districts with delegation of authority will continue to enforce Subpart OOO requirements and conduct inspections. Sources located in districts without delegation will be subject to EPA enforcement. To avoid confusion for sources moving from a non-delegated district to delegated district and vice versa, required federal notifications and records (apart from those associated with performance tests or equipment/process changes) will be made to US EPA Region IX and to the district the source is operating in. ARB will be responsible for supervising any required performance testing. Reconstructions or modifications, generally involving equivalent replacements or process changes, require application submittal under the State program and will be handled through the registration process accordingly.

Because equipment units such as rock crushing operations are considered stationary sources under federal law, provisions incorporated into the existing Regulation to avoid conflicts with federal New Source Review, Prevention of Significant Deterioration, and Title V requirements will still apply to Subpart OOO sources. These provisions include BACT requirements (outlined in section 2457 of the Regulation), 82 lb PM<sub>10</sub>/day and 10 tons PM<sub>10</sub>/year emissions limits,

Ringelmann 1 opacity restriction, and notification to US EPA when operating within 15 km of a Class I Area, and will be included as conditions of registration. Additional conditions outlining specific Subpart OOO requirements shall also be included on the registrations to aid sources in complying with NSPS provisions and help inspectors enforce these requirements. A preliminary list of proposed Subpart OOO conditions is attached. It should be noted that all of the conditions on the attached pages are not applicable to every registration. Pertinent conditions will depend on whether the source is newly constructed, reconstructed, and what control technologies are in place, etc.

#### Proposed Regulation Language

In order to allow Subpart OOO sources to register with the State program, the Regulation language must be modified. Suggested wording is as follows (additions to current Regulation language are underscored):

#### § 2451. Applicability

- (c) The following are not eligible for registration under this program:
- (6) any portable engine or equipment unit subject to an applicable federal New Source Performance Standard except for units subject to 40 CFR Part 60 Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), or Maximum Achievable Control Technology standard, or National Emissions Standard for Hazardous Air Pollutants; and...

#### § 2457 Requirements for Portable Equipment Units

- (b) Portable equipment units shall also meet the following applicable requirements:
- (3) Sand and gravel screening, rock crushing, and pavement crushing and recycling operations:
- (I) if applicable, the operation shall comply with the requirements of 40 CFR Part 60 Subpart OOO.<sup>6</sup>

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<sup>6</sup> As stated previously, more specific Subpart OOO conditions will be included on the final registration issued. However in the interest of brevity, these conditions will not be listed individually in the Regulation.

## Proposed NSPS Subpart OOO Conditions

*Sections from the federal regulation corresponding to each requirement are listed in brackets at the end of each condition for reference. Please bear in mind that all of the conditions listed herein are not intended to be included on every registration. Relevant conditions differ from source to source, depending on whether the facility is new, reconstructed, etc.*

### **General:**

1. The equipment shall comply with the federal New Source Performance Standards of 40 CFR Part 60 Subpart OOO.
2. The opacity standards shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided. [Sec. 60.11(c)]
3. No stack emissions shall be discharged into the atmosphere from any transfer point on belt conveyors or other affected facility which contain particulate matter in excess of 0.05 g/dscm (0.02 gr/dscf) and exhibit greater than 7% opacity unless the emissions are discharged to a wet scrubber. [Sec. 60.672(a)(1), (2)]
4. No fugitive emissions greater than 10% opacity shall be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility, except for truck dumping into a screening operation, feed hopper, or crusher. [Sec. 60.672(b), (d)]
5. No fugitive emissions greater than 15% opacity shall be discharged into the atmosphere from any crusher without a capture system. [Sec. 60.672(c)]
6. No stack emissions greater than 7% opacity shall be discharged into the atmosphere from any baghouse controlling only an individual, enclosed storage bin. [Sec. 60.672(f)]
7. No stack emissions shall be discharged into the atmosphere from multiple storage bins with combined emissions which contain particulate matter in excess of 0.05 g/dscm (0.02 gr/dscf) and exhibit greater than 7% opacity. [Sec. 60.672(g)]

### **Affected Facilities in an Enclosed Building:**

8. No stack emissions shall be discharged into the atmosphere from any transfer point on belt conveyors or other affected facility enclosed in a building, which contain particulate matter in excess of 0.05 g/dscm (0.02 gr/dscf) and exhibit greater than 7% opacity unless the emissions are discharged to a wet scrubber. [Sec. 60.672(a)(1), (2)]
9. No fugitive emissions greater than 10% opacity shall be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility enclosed in a building. [Sec. 60.672(b)]

10. No fugitive emissions greater than 15% opacity shall be discharged into the atmosphere from any crusher without a capture system enclosed in a building. [Sec. 60.672(c)]
11. In lieu of complying with the particulate matter concentration and opacity limits specified above, no visible emissions shall be discharged from a building enclosing any transfer point on belt conveyors or other affected facility, except from a vent with mechanically induced exhaust air flow. Vent emissions shall not contain particulate matter in excess of 0.05 g/dscm (0.02 gr/dscf) and exhibit greater than 7% opacity. [Sec. 60.672(e)(1), (2)]

**Affected Facilities with Wet Scrubbers:**

12. The owner or operator shall provide written notification to the US EPA Administrator of the date of demonstration of the continuous monitoring system performance in accordance with §60.13(c) of 40 CFR Part 60 Subpart A postmarked at least 30 days prior to such date. [Sec. 60.7(a)(5)]
13. Each owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report and/or summary report form to the US EPA Administrator semiannually except when the CMS data are used directly for compliance determination, in which quarterly reports shall be submitted; or the Administrator determines that more frequent reporting is necessary. Reports shall be postmarked by the 30<sup>th</sup> day following the end of each calendar half (or quarter as appropriate). The report format and information shall be as specified in §60.7 of 40 CFR Part 60 Subpart A. [Sec. 60.67(c), (d), (e)]
14. Any affected facility which uses a wet scrubber shall install, calibrate, maintain and operate a monitoring device for the continuous measurement of the pressure loss of the gas stream through the scrubber. The device must be certified by the manufacturer to be accurate within  $\pm 250$  pascals  $\pm 1$  inch water gauge and must be calibrated on an annual basis in accordance with manufacturer's instructions. [Sec. 60.674(a)]
15. Any affected facility which uses a wet scrubber shall install, calibrate, maintain and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to the wet scrubber. The device must be certified by the manufacturer to be accurate within  $\pm 5\%$  of design scrubbing liquid flow rate and must be calibrated on an annual basis in accordance with manufacturer's instructions. [Sec. 60.674(b)]

**Wet Process Facilities:**

16. No visible emissions shall be discharged into the atmosphere from wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill, or storage bin. [Sec. 60.672(h)(1)]

17. No visible emissions shall be discharged into the atmosphere, from screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, that process saturated material up to the first crusher, grinding mill, or storage bin. [Sec. 60.672(h)(2)]

**Testing:**

18. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, compliance with the particulate matter standards shall be determined in accordance with EPA Reference Method 5 or Method 17 in 40 CFR Part 60 Appendix A and as provided in 40 CFR Part 60 Subpart OOO. [Sec. 60.672(b)(1)]
19. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, compliance with the opacity standards shall be determined in by conducting observations in accordance with EPA Reference Method 9 in 40 CFR Part 60 Appendix A and as provided in 40 CFR Part 60 Subpart OOO. [Secs. 60.672(b)(2), (c), (f) and 60.675(b)(2), (c)]
20. The owner or operator of an affected facility subject to an opacity standard may submit continuous opacity monitoring system (COMS) data results produced during any performance test required in lieu of EPA Reference Method 9. Written notification shall be submitted to the ARB Executive Officer\* at least 30 days before any performance test required is conducted. [Sec. 60.11(e)(5)]
21. If the owner or operator elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard, he shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, Appendix B of 40 CFR Part 60. [Sec. 60.13(c)]
22. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, compliance with the fugitive emissions standards shall be determined in by conducting observations in accordance with EPA Reference Method 22 in 40 CFR Part 60 Appendix A and as provided in 40 CFR Part 60 Subpart OOO. [Secs. 60.672(e) and 60.675(d)]
23. If there is a delay in conducting any performance test required, the owner or operator shall submit a notice to the ARB Executive Officer\* at least 7 days prior to any rescheduled performance test. [Sec. 60.675(g)]

**Recordkeeping:**

24. The owner or operator shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [Sec. 60.7(b)]
25. The owner or operator shall make available, upon request by the US EPA Administrator, such records as may be necessary to determine the conditions under which the visual observations were made and shall provide evidence indicating proof of current visible observer emission certification. [Sec. 60.11(e)(1)]
26. The owner or operator shall submit semiannual reports to the US EPA Administrator of the occurrences when the measurements of scrubber pressure loss (or gain) and liquid flow rate differ by more than  $\pm 30\%$  from the average determined during the most recent performance test. Reports shall be postmarked within 30 days of the end of the second and fourth calendar quarters. [Sec. 60.676(d)]
27. The owner or operator shall submit written reports to the US EPA Administrator of the results of all performance tests conducted to demonstrate compliance with the particulate matter concentration standards, opacity observations made using EPA Method 9, and reports of fugitive emissions observations made using EPA Method 22. [Sec. 60.676(f)]
28. During the initial performance test and daily thereafter, the owner or operator shall record the measurements of the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate. [Sec. 60.676(c)]
29. The owner or operator shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required recorded in a permanent form suitable for inspection. The file shall be retained for at least two years. [Sec. 60.676(a)]
30. An owner or operator replacing an existing facility with a piece of equipment of equal or smaller size having the same function, shall submit the information outline in §60.676(a) of 40 CFR Part 60 Subpart OOO to the ARB Executive Officer\*. [Sec. 60.676(a)]

**Reporting:**

31. The owner or operator shall provide written notification to the ARB Executive Officer\* of the anticipated date for conducting the opacity observations. The notification shall include, if appropriate, a request for the Executive Officer to provide a visible emissions

reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date. [Sec. 60.7(a)(6)]

32. The owner or operator shall provide written notification to the ARB Executive Officer\* that continuous opacity monitoring system (COMS) data results will be used to determine compliance with the opacity standard in lieu of EPA Method 9. The notification shall be postmarked at least 30 days prior to such date. [Sec. 60.7(a)(7)]
33. The owner or operator shall provide the ARB Executive Officer\* at least 30 days prior notice of any performance test to afford the Executive Officer the opportunity to have an observer present. [Sec. 60.8(d)]
34. The owner or operator shall provide written notification to the ARB Executive Officer\* of the date of commencement of construction (or reconstruction) of an affected facility postmarked within 30 days after such date. [Sec. 60.7(a)(1)]
35. The owner or operator shall provide notification to the ARB Executive Officer\* of the actual date of initial startup of each affected facility to include both the home office and the current address or location of the equipment postmarked within 15 days after such date. [Secs. 60.7(a)(3) and 60.676(I)]
36. The owner or operator shall provide written notification to the ARB Executive Officer\* of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless the change is specifically exempted under an applicable subpart in §60.14(e) of 40 CFR Part 60 Subpart A. The notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. [Sec. 60.7(a)(4)]
37. The owner or operator of any screening operation, bucket elevator, or belt conveyor that processes saturated material and subsequently processes unsaturated material shall submit a report of the change to the ARB Executive Officer\* within 30 days following such change. [Sec. 60.676(g)]
38. The owner or operator of any screening operation, bucket elevator, or belt conveyor that processes unsaturated material and subsequently processes saturated material shall submit a report of the change to the ARB Executive Officer\* within 30 days following such change. [Sec. 60.676(g)]

\* Since the ARB will supervise required performance testing and track reconstructions and modifications, the lead agency reference in the NSPS is changed from the US EPA Administrator to the ARB Executive Officer.



**Appendix E:**

**MARCH 20, 1998 LETTER FROM  
MR. ALAN W. ECKERT TO MS. KATHLEEN WALSH**

**Appendix F:**

**AIR RESOURCES BOARD MEMORANDUM RE: DISTRICT AUTHORITY TO  
REQUIRE OFFSETS FOR PORTABLE EQUIPMENT**

**Appendix G:**

**AIR QUALITY IMPACT FROM STATE-REGISTERED EQUIPMENT  
OPERATING WITHIN STATE TERRITORIAL WATERS**

## Appendix G

### **AIR QUALITY IMPACT FROM STATE-REGISTERED EQUIPMENT OPERATING WITHIN STATE TERRITORIAL WATERS**

This appendix compares the proposed amendments to the Regulation to existing district programs. The requirements of the Statewide Registration Program were compared with district programs for portable equipment operating in California.

The discussion below focuses upon NO<sub>x</sub> emissions from engines. In general, emissions of CO, HC, PM<sub>10</sub>, and SO<sub>x</sub> from an engine are considerably lower than NO<sub>x</sub> emissions. In addition, the emissions from portable equipment units are considerably lower than the emissions from the engine.

#### **A. Operation of Existing Equipment in State Territorial Waters**

Portable engines and equipment units are typically expected to operate at the following activities within STW: oil and gas exploration services, construction activities, and dredging.

Staff anticipates that virtually all of the engines and equipment units that seek to operate within the STW under the Statewide Registration Program are currently operating in California under district authority. The requirements under the Regulation would be similar or more stringent than control technologies, mass emission limits and/or daily and annual emission limitations required by local districts. If the requirements of the Regulation differ from the technology requirements of district programs, the differences will be discussed below. Finally, over time engines registered in the Statewide Registration Program would be subject to the Statewide Registration Program's retrofit requirements. This requirement is expected to result in an overall decrease in emissions from portable engines operated within STW versus emissions from engines permitted by a district.

##### **1. Oil and Gas Exploration Services**

Oil and gas exploration servicing activities occur within the STW of Santa Barbara County Air Pollution Control District (APCD) and South Coast Air Quality Management District. The use of portable engines and equipment units for servicing oil and gas production operations is not expected to change as a result of allowing State-registered equipment to operate within STW.

##### **a. Santa Barbara County Air Pollution Control District**

There is one oil and gas production platform within the STW adjacent to Santa Barbara County APCD. Portable engine driven equipment would be used to service the oil and gas wells and for construction related activity at the platform. In addition, portable engines and equipment units may be used in construction projects to support oil and gas production within the OCS.

The proposed amendments to the Regulation will not affect Santa Barbara County APCD's ability to require mitigation for State-registered equipment operating within STW. Santa Barbara County APCD Rule 202, Exemptions to Rule 201, list two limits that may affect State-registered portable engines: (1) the combined emissions from construction equipment used to construct a stationary source which requires an Authority to Construct is limited to 25 tons of any pollutant for a 12-month period; and (2) limits the emissions from drilling equipment to 25 tons for a 12-month period per stationary source. Based upon the historical operation of portable engines at the platform, staff does not expect the emissions from State-registered engines to exceed 25 tons per year for drilling and well servicing operations. This is because: (1) the emissions from a typical project using portable engines on the platform are small (less than 0.5 tons of NOx); and (2) the low frequency of projects over a year using drilling equipment (usually less than five projects a year). With regard to the construction equipment limitation, major construction projects at the platform do not occur every year, but tend to have emissions in excess of 25 tons per year. Therefore, under the proposed amendments to the Regulation, the district's ability to require mitigation would not be affected. In the case of routine operational maintenance, the annual emissions tend to be less than 10 tons per year, well below the district's mitigation threshold. Consequently, routine maintenance activities would not normally trigger the mitigation requirements.

For the periodic project that would take place in both the OCS and STW, the entire project, as specified in the proposed amendments to the Regulation, would be subject to the district's permitting program. That is, the portion of the project that would occur within STW could not be completed under the Statewide Registration Program. This is intended to allow the district the ability to permit and mitigate the full impact of an individual project covered by both the Statewide Registration Program and district programs.

#### **b. South Coast Air Quality Management District**

Several oil and gas production platforms are located within the STW adjacent to South Coast Air Quality Management District (SCAQMD). Similar to the platform located in Santa Barbara County, portable engine driven equipment would be used to service these platforms. These portable engines have generally been allowed to operate without restriction until recent amendments to the district's New Source Review Rule, and the provisions contained in SCAQMD Rule 1110.2 affecting portable engines. As discussed previously, the districts are preempted from regulating all portable engines and the Regulation's engine requirements will result in a significant reduction of criteria pollutant emissions from portable engines as compared to the district's program. In addition, SCAQMD Regulation XIII, Rule 1301, General, exempts nonroad engines from the provisions of the district's New Source Review Rule. To be consistent with the Statewide Registration Program's definition of nonroad, the district has determined that nonroad engines are those engines manufactured after November 15, 1990. Since the ARB will have authority to regulate nonroad engines, the Statewide Registration Program will achieve additional reductions for nonroad engines beyond the requirements of the district's program.

Finally, the emissions resulting from drilling projects that exceed five days are included in the emissions of stationary sources that are in the SCAQMD's RECLAIM program and therefore the owner/operator of the stationary source may be required to mitigate these emissions. As discussed above, the proposed amendments to the Regulation would not affect the district's ability to require mitigation.

## **2. Construction Activities**

Construction activities include equipment used for piling, and heavy lifting.

### **a. Piling**

Piling is a common construction activity in all districts, especially in the construction of major structures such as an office building. However, piling occurs less frequently within the STW because few structures are constructed within the STW. The duration of this type of activity may be as short as a few days for the construction of a pier and last as long as several months for the construction of a major pier. Emissions from piling projects are from the piling engine and the engine powering the generator. A typical piling project would last for a week and result in NOx emissions that are less than one ton. The emissions from a major project could exceed 25 tons of NOx.

Many districts typically require permits for piling equipment, but do not impose any additional technological requirements. The control technology requirements of the Regulation for piling are consistent with district requirements.

With regard to mitigation requirements, except for the rare major project, piling projects are not expected to exceed the thresholds that would trigger district mitigation requirements.

### **b. Heavy Lifting**

Heavy lifting equipment can be used in the construction or repair of structures on the coast or located within the STW. The equipment may be used for one day or for several months for a major construction project. Since few large construction projects occur within the STW, most projects using heavy lifting equipment are expected to be of short duration.

The emissions from a derrick barge designed to perform heavy lifting would be from the engines used to operate the crane and the generator. Most heavy lifting projects would result in NOx emissions less than 0.5 ton. For a construction project that would take six months to complete, the NOx emissions would be about 16 tons.

Derrick barges equipped to perform heavy lifting are permitted to operate within the SCAQMD. As discussed above, the majority of portable engines, including those on derrick barges, were allowed to operate without restriction. Furthermore, the district is preempted from

regulating all portable engines and therefore, the Regulation's engine requirements will result in a significant reduction of criteria pollutant emissions from portable engines as compared to the district's program.

In addition, derrick barges have operated in Santa Barbara County. While permits for the engines on the barge are not required, the emissions may be subject to the limit of 25 tons of any pollutant for a 12-month period from construction equipment. Emissions from heavy lifting in Santa Barbara are expected to be insignificant because the expected duration of these types of projects would seldom exceed a day. Therefore emissions would be less than 1 ton of NO<sub>x</sub>. In the unlikely event that there is an increase in criteria emissions from the operation of State-registered equipment at a stationary source, such as an oil and gas platform, the district has the ability to require the owner/operator of the platform to provide the necessary mitigation for the emissions from State-registered equipment.

### **3. Dredging**

Dredging can be done with either a mechanical or hydraulic dredge. An example of a mechanical dredge is a clamshell dredge. Examples of hydraulic dredges include cutterhead pipeline dredge and self-propelled hopper dredge. In addition, barges may be used to transport the dredged material. The emissions from a clamshell dredge are from the engines that operate the main hoist and drive the generator. For hydraulic dredges, the emissions are from the engines that drive the pump and generator. The engines used on hydraulic dredges are the largest engines used within STW.

The emissions from a clamshell dredge are lower than the emissions expected from a hydraulic dredge. A large clamshell dredge using a 2,000 horsepower engine for the main hoist and operating 24-hours a day for two months would emit about 17 tons of NO<sub>x</sub>. In comparison, a cutterhead pipeline dredge equipped with three or four large engines with one or more engines driving the pump, another engine driving the generator and a third engine used as a backup generator, with the total horsepower exceeding 8,000 horsepower, can emit 39 tons of NO<sub>x</sub> for the same duration project.

#### **a. Bay Area Air Quality Management District**

Bay Area Air Quality Management District (BAAQMD) does not currently permit or regulate equipment used in dredging activities. Clearly, the requirements of the Regulation as proposed for operations within STW are more stringent since the BAAQMD does not impose any requirements for dredging activities.

#### **b. Monterey Bay Unified Air Pollution Control District**

Two harbors located in the Monterey Bay Unified APCD undergo annual dredging with dredging equipment that is owned and operated by the respective harbor authorities.

As part of the proposed amendments affecting the operation of equipment within the STW, dredging equipment owned by a harbor authority and operated only within that harbor would not be eligible for State registration. Therefore, under normal circumstances State-registered portable equipment is unlikely to operate within the STW adjacent to the Monterey Bay Unified APCD. The requirements of the Statewide Registration Program, as proposed for operations within STW, will have minimal impact on the district.

**c. San Luis Obispo County Air Pollution Control District**

For the STW adjacent to San Luis Obispo County APCD, harbor maintenance, which includes dredging, is the main activity using portable equipment. The harbor is typically dredged every 2 to 3 years, but may be done more frequently.

Most of dredging activity in the district has been completed using either a hopper dredge or a hydraulic suction dredge. In the case of the hopper dredge, except for the engine associated with the generator set, the requirements the engines would operate under a Statewide registration would be similar to the control technologies required by the district. The district has required the engine associated with the generator set be equipped with control equipment that achieves an 80 percent NOx emission reduction. For the hydraulic suction dredge, all engines on the dredge are required to be equipped with control equipment that achieves an 80 percent NOx emission reduction.

While the district has required the retrofit of engines used on dredges as part of its New Source Review Program, the federal preemption would prevent the district from enforcing this requirement. That is, these dredges could operate in the future in San Luis Obispo without using SCR. While the proposed amendments to the Regulation do not require the use of SCR, staff believes the operator of the dredges registered with the State will continue to operate the control equipment either to avoid the mitigation requirements of the corresponding onshore district or to maximize the available operating hours. Consequently, if these dredges register with the State, the proposed mitigation requirements will limit any potential increase in emissions.

The Morro Bay dredging projects have resulted in NOx emissions of about 12 tons from the dredge itself and additional emissions from engines located on barges used in conjunction with the dredging operation. The proposed amendments to the Regulation would consider the dredge and associated equipment, such as the barge, as one project. The proposed amendments to the Regulation should not result in a change in the dredging activities in the district. In addition, the district does not consider the periodic dredging projects within Morro Bay as an

emissions increase, and therefore these periodic dredging projects have been exempt from the district mitigation requirements.

**d. Santa Barbara County Air Pollution Control District**



For the STW adjacent to Santa Barbara County APCD, one harbor is dredged periodically with an electric dredge.

With regard to the electric dredge used in Santa Barbara County, the proposed amendments to the Regulation would specify that State-registered equipment cannot operate within the harbor where the electric dredge is located. That is, another dredge, prior to operating within that harbor, would need to obtain authorization and permits from the district.

**e. Ventura County Air Pollution Control District**

For the STW adjacent to Ventura County APCD, harbor maintenance, which includes dredging, is the main activity using portable equipment. Periodic dredging, typically every one to two years, occurs at two harbors located in the district.

The proposed amendments to the Regulation should not result in a change in the dredging activity in the district. Two dredges, which also operate in the STW adjacent to San Luis Obispo County APCD, are permitted to operate within the STW adjacent to Ventura County APCD, with one dredge being a hydraulic suction dredge and the other being a hopper dredge. As discussed above, the district is preempted from regulating the engines on the dredge, but the dredges are permitted to operate with SCR. Under the proposed amendments to the Regulation, the owner/operator of the dredge is expected to continue operating the SCR system in order to either avoid the offset requirements of the corresponding onshore district or maximize the dredge's operating time. The harbor dredging projects in Ventura County typically result in NO<sub>x</sub> emissions from the dredge of about 20 to 30 tons, depending upon the amount of material to be dredged. (In this case, there are no emissions from auxiliary equipment since the dredged material is pumped directly to shore.)

**f. South Coast Air Quality Management District**

For the STW adjacent to the SCAQMD, dredging occurs at harbors and coastal power plants located throughout the district. Consequently, a large fleet of clamshell dredges, as well as one hydraulic dredge operate within the STW adjacent to the SCAQMD.

Most of the engines associated with the dredges are either permitted or registered with the district. The majority of portable engines, including those on dredges, are allowed to operate without restriction. To obtain Statewide registration, these engines were retrofitted by the applicant, primarily with implementing four degree timing retard, to satisfy the Statewide Registration Program's technology requirements. Therefore, the Regulation's technology requirements resulted in additional emission reductions. In addition, SCAQMD Regulation XIII, Rule 1301, General, exempts nonroad engines from the provisions of the District's New Source Review Rule. Once ARB receives authority to regulate these engines, the Statewide Registration Program will achieve additional reductions.

**g. San Diego County Air Pollution Control District**

For the STW adjacent to San Diego County APCD, harbor maintenance and beach restoration, which includes dredging, is the main activity using portable equipment. One harbor located in the district undergoes periodic dredging and has been the site for major dredging projects.

The proposed amendments to the Regulation should not result in a change in the dredging activity in the district. One hydraulic dredge equipped with SCR is permitted to operate in San Diego. As discussed above, dredges previously permitted to operate with control equipment is expected to continue using the control equipment.

Larger dredging projects, such as deepening navigable waterways, are likely to trigger mitigation requirements in the district's permit programs. One recent large dredging project included several dredges and other auxiliary equipment. For the purposes of the proposed amendments to the Regulation, all this equipment would be considered one project, and be subject to the mitigation requirements of the district. In regard to beach restoration projects, these type of projects typically result in emissions well below the 15 tons per year District offset threshold.

**Appendix H:**

**DISTRICT CRITERIA POLLUTANT OFFSET TRIGGER LEVELS**

## Appendix H

### OFFSET REQUIREMENTS FOR PORTABLE EQUIPMENT

This section discusses district mitigation requirements for a portable engine. Table H-1 identifies the offset provisions of the districts impacted by the provisions of the proposed amended Regulation. Table H-2 identifies how portable engines that register with the State would be permitted under the district permitting program. The discussion below focuses on the NOx emission thresholds since the major emissions from portable engines is NOx.

#### 1. Bay Area Air Quality Management District

BAAQMD Regulation 2, Permits, Rule 1, General Requirements exempts owners/operators from the requirement to obtain an Authority to Construct or Permit to Operate for the following engine classifications: internal compression engines with output ratings that are less than 250 horsepower, and portable engines that are used on a temporary basis for less than 30 days per calendar year at any one stationary source. Further, the district does not require owner/operators of dredges to obtain permits. Finally, portable engines and portable equipment units operating under a portable permit pursuant to District regulation 2-1-220 or meeting the requirements of the California Air Pollution Control Officer Association's (CAPCOA) Portable Equipment Registration Rule would be exempted from the mitigation requirements of the district New Source Review Program. The requirements of both the district portable equipment program and the CAPCOA Portable Equipment Registration Rule would limit the emissions of any pollutant to 10 tons per year.

#### 2. Monterey Bay Unified Air Pollution Control District

New portable engines would be subject to the mitigation requirements of the District's New Source Review Program. As indicated in Table H-1, the district's offset trigger level is 137 lb/day. However, in most instances the district issue permits for portable engines to limit the operation of the portable engine such that emissions are below the District's offset requirements. In the case of a new dredge that is equipped with four engines, but only three engines would be operating at any one time (the fourth engine is an emergency backup engine), offsets would be triggered based on the emissions of all three engines.

#### 3. San Luis Obispo County Air Pollution Control District

San Luis Obispo County APCD Rule 201, Equipment Not Requiring A Permit, exempts district registered portable engines and equipment units from the district permit requirements. By being exempt from permitting requirements, this equipment is also not subject to the district New Source Review requirements. In addition, the district has not required mitigation for dredging projects because the district does not consider emissions from periodic dredging projects as an emissions increase.

#### **4. Santa Barbara County Air Pollution Control District**

Santa Barbara County APCD Rule 202, Exemptions to Rule 201, exempts from permit engines used in construction activities, drilling equipment used in state waters, and temporary equipment where the emissions of all affected pollutants do not exceed 1 ton (except carbon monoxide, which shall not exceed 5 tons) and the activity is less than 60 days in a 12 month period. However, offsets are required if either: the combination of emissions from all construction equipment used to construct a stationary source which requires an Authority to Construct exceed 25 tons of any affected pollutant in a 12 month period or emissions from drilling equipment exceed 25 tons of any affected pollutant per stationary source in a 12 month period.

For a new dredge, the Districts offset thresholds of 55 lb/day and 10 tons per year would apply in determining whether mitigation would be required.

#### **5. Ventura County Air Pollution Control District**

New portable engines are subject to the mitigation requirements of the District's New Source Review Program. The district issues permits for portable engines to limit the operation of the portable engine such that emissions are limited to 5 tons a year of NO<sub>x</sub> to avoid district mitigation requirements.

#### **6. South Coast Air Quality Management District**

The permitting requirements for engines in the SCAQMD depend upon whether the engine is considered nonroad. For nonroad engines, SCAQMD Regulation XIII, Rule 1301, General, exempts nonroad engines from the provisions of the District's New Source Review Rule, including offset requirements. Engines manufactured after November 15, 1990 are considered by the District to be nonroad engines. For engines manufactured prior to November 15, 1990, the District exempts engines that emit less than 55 lb/day of NO<sub>x</sub> from offset requirements. Engines that emit more than 55 lb/day would be subject to the modeling and mitigation requirements of SCAQMD Regulation XIII, Rule 1303, Requirements.

#### **7. San Diego County Air Pollution Control District**

San Diego County APCD Rule 11, Exemptions From Rule 10 Permit Requirements, exempts District registered portable engines and equipment units from District permit requirements. By being exempt from permitting requirements, this equipment is also not subject to the District New Source Review requirements. Portable engines and equipment units that are unable to meet the requirements of the district registration program would be subject to the 15 tons per year offset threshold.

### **Table H-1 District Criteria Pollutant Offset Trigger Levels Applicable to State Territorial Waters**

District	CO	NO <sub>x</sub>	PM <sub>10</sub>	SO <sub>x</sub>	VOC
Bay Area		>15 tons/yr	>1.0 ton/yr since 4/15/91 at a Major Facility	>1.0 ton/yr since 4/15/91 at a Major Facility	>15 tons/yr
Monterey Bay Unified	≥550 lbs/day	≥137 lbs/day	≥82 lbs/day	≥150 lbs/day	≥137 lbs/day
San Luis Obispo County	≥250 tons/yr	≥25 tons/yr	≥25 tons/yr	≥25 tons/yr	≥25 tons/yr
Santa Barbara County	≥150 lbs/day (nonattainment) ≥25 tons/yr (nonattainment)	≥55 lbs/day (nonattainment) ≥10 tons/yr (nonattainment)	≥80 lbs/day ≥15 tons/yr	≥55 lbs/day (nonattainment) ≥10 tons/yr (nonattainment)	≥55 lbs/day (nonattainment) ≥10 tons/yr (nonattainment)
Ventura County		≥5.0 tons/yr	≥15.0 tons/yr	≥15.0 tons/yr	≥5.0 tons/yr
South Coast	0 (No increase)	0 (No increase)	0 (No increase)	0 (No increase)	0 (No increase)
San Diego County		≥15 tons/yr (non-major source)			≥15 tons/yr (non-major source)

**Table H-2**  
**District Offset Requirements That Are Applicable to New Portable Engines**

District	
Bay Area	Subject to offset requirements in Table H-1, unless: <ul style="list-style-type: none"> <li>• engine is less than 250 bhp (exempted from district permit requirement)</li> <li>• portable engine used less than 30 days/year at a stationary source (exempted from district permit requirement)</li> <li>• portable engine is registered with the district or through the CAPCOA Portable Equipment Rule</li> <li>• used in dredging (dredges are exempted from permit requirement because they are not considered stationary sources)</li> </ul>
Monterey Bay Unified	Subject to offset requirements in Table H-1
San Luis Obispo County	Subject to offset requirements in Table H-1, unless: <ul style="list-style-type: none"> <li>• the portable engine is registered with the district Portable Equipment Registration Program</li> <li>• the dredging operations has occurred historically (not considered an emission increase in the district)</li> </ul>
Santa Barbara County	Subject to offset requirements in Table H-1, unless: <ul style="list-style-type: none"> <li>• the portable engine is used in construction activities or used with drilling equipment (exempted from permit requirement), unless emissions exceed 25 TPY in any 12 month period</li> <li>• the portable engine is considered temporary equipment, where emissions of all affected pollutants do not exceed 1 ton and use of equipment does not exceed 60 days in any 12 month period (exempted from permit requirement)</li> </ul>
Ventura County	Subject to offset requirements in Table H-1
South Coast	Subject to offset requirements in Table H-1 and dispersion modeling requirements, unless: <ul style="list-style-type: none"> <li>• it is a nonroad engine manufactured after 11/15/90</li> </ul>
San Diego County	Subject to offset requirements in Table H-1, unless: <ul style="list-style-type: none"> <li>• the portable engine is registered with the district Portable Equipment Registration Program</li> </ul>

**Appendix I:**

**EMISSION REDUCTIONS RESULTING FROM  
THE STATEWIDE REGISTRATION PROGRAM**



## Appendix I

### EMISSION REDUCTIONS RESULTING FROM THE STATEWIDE REGISTRATION PROGRAM

#### Introduction

Staff used the methodology described below to estimate NOx emission reductions from portable internal combustion engines retrofitted to comply with the technology requirements of the Statewide Registration Program. Staff reviewed the Statewide registration applications of owners/operators of engines that submitted South Coast Air Quality Management District (SCAQMD) permits or registrations as proof of residency. NOx emission reductions were claimed for the Statewide Registration Program if the owner/operator submitted documentation with the Statewide registration application certifying the engine had undergone 4-degree timing retard, and the SCAQMD permit or registration did not require 4-degree timing retard on the engine. Staff estimates a 15% reduction in NOx emissions from the 4-degree timing retard technology. In addition, the NOx reduction depends on the size of the engine, the NOx emission rate, and the operating characteristics of the activity utilizing the engine.

#### Methodology

The size of the engine and, in many cases, the pollutant emission rates were provided with the applications. In the absence of valid emission data, default values were used. The following annual operating hours were used for the following engine activities:

- 800 hours per year for the upper engine used in cranes (equivalent to three hours of operation per day for five days per week and 52 weeks per year)
- 1,000 hours per year for engines used in dredging operations
- 1,300 hours per year for engines used in construction operations (equivalent to five hours of operation per day for five days per week and 52 weeks per year)

Engines not included include in this analysis include: (1) engines that are were retrofitted to satisfy the requirements of the California Air Pollution Control Officers Association registration program for portable equipment and (2) engines that would be used exclusively within the Outer Continental Shelf (OCS), since the engines would remain under the jurisdiction of the corresponding onshore district. For engines with SCAQMD permit or registration fuel limits, staff compared the SCAQMD limits to the limits imposed by the Statewide Registration Program. Any potential increase in NOx emissions from differences between the SCAQMD permit or registration and Statewide Registration Program requirements were deducted from the overall NOx emission reduction.

## **Results**

Staff review of the engines applying for Statewide registration indicates that there are 176 engines that operated under SCAQMD permit or registration and did not require 4-degree timing retard. In addition, two of the 176 engines had fuel limits on the SCAQMD permit or registration. Based on the annual operating hour parameters listed in the methodology section above and fuel limits on SCAQMD permits or registrations, staff estimates that an additional 63 tons per year of NOx emission reductions result from the 4-degree timing retard requirement.

**Appendix J:**  
**REFERENCES**

## Appendix J

### REFERENCES

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