

California Environmental Protection Agency



Air Resources Board

**FINAL STATEMENT OF REASONS FOR RULEMAKING
Including Summary of Comments and Agency Responses**

**ADOPTION OF AMENDMENTS TO THE VERIFICATION PROCEDURE, WARRANTY
AND IN-USE COMPLIANCE REQUIREMENTS FOR IN-USE STRATEGIES TO
CONTROL EMISSIONS FROM DIESEL ENGINES**

Public Hearing Date: January 24, 2008
Agenda Item No.: 08-1-8

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I. INTRODUCTION AND BACKGROUND

In 1998, the Air Resources Board (ARB or Board) identified diesel particulate matter (PM) as a toxic air contaminant (Title 17, California Code of Regulations (CCR), section 9300) following a ten-year review process. A toxic air contaminant is an air pollutant which may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health. Many toxic air contaminants are volatile and are found primarily in the atmosphere as gases, but some are atmospheric particles or liquid droplets. Diesel PM is of particular concern because of its prevalence in California.

The amount of diesel PM emitted into California's air and the potential cancer risk it poses make diesel PM the most harmful toxic air contaminant in the state. To address this significant health concern, the ARB adopted the Diesel Risk Reduction Plan (DRRP) in 2000, which outlines possible control measures to reduce diesel PM. One of the key components in the DRRP involves using diesel emission control strategies with the existing fleet, which consists of diesel vehicles and equipment in on-road, off-road, and stationary applications. To date, several regulations targeting emission reductions from in-use diesel vehicles and engines have been adopted by the Board. However, before a diesel emission control strategy may be used to satisfy a proposed regulatory requirement, ARB must first determine if it can effectively reduce emissions.

To ensure that diesel emission control strategies (DECS) achieve real and durable reductions of PM and oxides of nitrogen (NO_x) emissions, staff developed the *Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines* (the Procedure), which the Board initially adopted in May 2002. The Procedure is used by staff to evaluate DECS through emissions, durability, and field testing. In addition, it permits further evaluation after installation through warranty and in-use compliance requirements. The Procedure is therefore ARB's key tool for ensuring that DECS used by fleet owners are an effective means to achieving the emission reduction goals of the DRRP.

As noted, the Procedure is used by staff to ensure that in-use diesel emission control systems achieve real and durable PM emissions reductions. It specifies test procedures, warranty requirements, and in-use compliance testing requirements. Systems that meet all of the Procedure's requirements are verified and thus become candidate compliance options for the ARB fleet regulations that require the control of diesel emissions from in-use fleets.

In-use fleet regulations, both adopted by the Board and currently under development, rely on having verified diesel emission control systems available to fleet owners as compliance options. Diesel vehicles and equipment for which regulations have already been adopted include transit buses (title 13 CCR section 2023, et seq.), solid waste collection vehicles (title 13 CCR section 2021, et seq.), vehicles that belong to public agencies and utilities (title 13 CCR section 2022, et seq.), mobile cargo handling equipment at ports and intermodal rail yards (title 13 CCR section 2479), and transport

refrigeration units (title 13 CCR section 2477). A far-reaching in-use regulation has been adopted to control emissions from private on-road heavy-duty diesel vehicles (title 13 CCR section 2449). These regulations provide several paths to compliance, one of which is the installation of verified diesel emission control systems. To support the successful implementation of these regulations, it is therefore critical for the Procedure to be an effective and efficient means to evaluate diesel emission control systems. However, as the verification program has matured, staff found that a number of amendments to the Procedure are necessary to better serve the needs of the in-use fleet regulations.

To improve the verification process and better support ARB's in-use fleet rules, ARB staff proposed amendments to the Procedure through the publication on December 7, 2007, of a notice of public hearing to consider amendments to the Procedure and the release of the Initial Statement of Reasons for the rulemaking (Staff Report) entitled "Proposed Amendments to the Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines". The most significant amendments proposed by staff are summarized below:

Conditional Extensions

Staff proposed amendments that would provide for a conditional extension period during which verified diesel emission control systems may be more quickly deployed for use with a greater range of on-road applications than under the current Procedure. The conditional extension would allow applicants with verified systems to apply to extend their verifications to include additional on-road vehicles by submitting some, but not all of the information and data required by the Procedure. If an applicant is granted a conditional extension, the applicant would then be able to sell the system immediately as conditionally verified and would have one year to formally complete the extension by supplying the rest of the information required by the Procedure. Conditional extensions would therefore accelerate the verification of proven technologies for additional on-road applications and provide regulated fleet owners with additional compliance options more quickly than can occur under the current Procedure.

Systems that Only Reduce Oxides of Nitrogen (NOx) Emissions

Currently, the Procedure does not apply to systems that are intended to reduce emissions of NOx only. Staff proposed that the scope of the Procedure be broadened to allow for the verification of systems that reduce emissions of NOx, but not PM, for certain diesel engines. This could help to address the need for additional reductions in emissions of NOx from in-use diesel engines.

Testing Requirements for Off-Road Applications and Fuel-Based Strategies

Staff proposed amendments to the Procedure that would require applicants seeking verification of a diesel emission control system intended for use with variable speed off-road applications to perform emission testing using the transient test procedures outlined in title 13, CCR, section 2423 and the incorporated California Exhaust Emissions Standards and Test Procedures for New 2008 and Later Tier 4 Off-Road

Compression-Ignition Engines, Part I-C (New 2008 Off-Road Test Procedures). All systems intended for variable speed off-road engines would be required to undergo three hot-start tests using the Nonroad Transient Cycle (NRTC) as prescribed in the above-referenced procedures. The transition to a transient test cycle is important because most off-road engines and equipment have transient duty cycles that are not well characterized by the steady state test cycle currently required. As a result, the current test cycle provides a very limited means for evaluating the performance of many kinds of emission control systems. To assist applicants in the transition to the NRTC, staff proposed that applicants be allowed to continue to use the existing steady-state test procedures outlined in the current ARB off-road regulations until December 31, 2008, provided certain criteria are met.

Staff also proposed that all fuel-based control systems follow the verification procedures specified in section 2710. This will ensure similar emissions testing for all fuel-based strategies and require appropriate testing that ensures real and durable emissions reductions from applications subject to emissions requirements in the fleet rules.

Requirements for NOx Reduction Systems

Staff proposed that NOx reduction systems be verified using five levels, called Marks, defined by the lower bounds of NOx reduction performance. The lower bounds are equally spaced apart in 15 percent increments. Systems that achieve NOx reductions of less than 25 percent would not be verified. This proposal would address the growing need for NOx reductions by providing broadly defined verifications that complement existing technologies.

To assist in the evaluation of the in-use performance of aftertreatment-based NOx emission control systems, staff proposed that NOx emissions both upstream and downstream of the NOx device be measured and recorded during durability and field demonstrations. These data provide a record of activity as well as insight into the functioning of a system while in actual use.

Staff also proposed that the Board eliminate the requirement to test an on-road NOx emission control system under conditions that generate off-cycle emissions. One fundamental issue with the current requirement is that there is no standard method or test cycle which is guaranteed to trigger off-cycle NOx emissions for all engine makes and models. Staff has had only limited success with emissions test conditions that reliably result in off-cycle emissions. The proposal should reduce verification costs and simplify the overall process.

Other Amendments

Staff proposed that the Board add additional clarifications of the current requirements. These include deadlines for submitting in-use compliance information, a requirement for specific information to be kept for each diesel emission control system sold, a requirement that verified systems actually be sold in California, and specific requirements regarding verification transfers, acceptance of pre-existing data, system

labeling, and sales and installation. These proposed amendments will aid applicants by clarifying the intent of existing requirements.

The rulemaking was initiated by the December 7, 2007 publication of a notice of a January 24, 2007 public hearing to consider the adoption of proposed amendments to the Procedure. The hearing notice is entitled "Notice of Public Hearing to Consider Amendments to the Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines." On December 7, 2007 the staff also published the "Staff Report: Initial Statement of Reasons for Proposed Rulemaking, Proposed Amendments to the Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines" (the Staff Report or ISOR) and made it available to the public upon request as required by Government Code § 11346.2.

The Staff Report contains an extensive description of the rationale for the original proposal. Attachment A to the Staff Report contains the originally-proposed text of the amendments.

At the public hearing held on January 24, 2008, the Board considered the originally proposed amendments and staff's proposed modifications to the amendments, and received written and oral comments from interested stakeholders. The Board approved the proposed amendments, as modified, and directed staff to work with stakeholders to clarify certain provisions of the modified amendments.

At the conclusion of the January 24, 2008 hearing, the Board voted unanimously to adopt Resolution 08-13, in which it approved the originally proposed amendments with the modifications presented by staff. The Resolution directed the Executive Officer to incorporate the modifications (set forth in Attachment B to the Resolution) into the proposed regulatory text, with such other conforming modifications as may be appropriate. In accordance with section 11346.8 of the Government Code, the Board directed the Executive Officer to adopt the modified amendments after making the modified text available to the public for comment for a period of at least 15 days. The Board further directed the Executive Officer to consider written comments regarding the modified text that may be submitted during this period, make modifications as may be appropriate in light of the comments received, and present the regulations to the Board for further consideration if warranted.

The text of the Board-approved amendments to the Procedure, with the proposed new modified text clearly indicated, was made available for a supplemental 15-day comment period in a "Notice of Public Availability of Modified Text" issued on September 16, 2008. The notice described each modification, and the proposed title 13 CCR regulatory text, with the modifications clearly indicated, was attached to the Notice. The 15-day Notice and its attachment were mailed on June 4, 2007, to all parties identified in section 44(a), title 1, CCR, along with other interested parties. The 15-day Notice and its attachment were also posted on the ARB's Internet site for the rulemaking on

September 16, 2008. Several written comments were received during the 15-day comment period.

After considering the comments submitted during the 15-day comment period, on, the Executive Officer issued Executive Order R-08-014, which adopted the final amendments.

A complete description of the proposed regulatory action and its rationale are contained the Staff Report, and the Notice of Modified Text. These documents are incorporated herein by reference. This Final Statement of Reasons (FSOR) updates the Staff Report by identifying and explaining the modifications made to the text of the originally proposed regulatory language. The FSOR also contains a summary of the comments the Board received on the proposed regulatory action during the formal rulemaking process and ARB's responses to those comments.

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies, private persons and businesses in reasonable compliance with the proposed regulations are presented below.

Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the proposed regulatory action will not create costs or savings to any state agency or in federal funding to the State, costs or mandate to any local agency or school district whether or not reimbursable by the State pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code, or other non-discretionary savings to State or local agencies.

In developing this regulatory proposal, ARB staff evaluated the potential economic impacts on representative private persons or businesses. The ARB is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action. Participation in the Procedure is purely voluntary both in its current form and as amended under the proposed action. While it is true that participation in the verification process is voluntary and there is no prohibition on selling diesel emission control strategies in California that have not been verified by the ARB, the ARB has adopted and may in the future adopt regulations to requiring reductions of PM from in-use diesel vehicles through the application of verified, retrofitted diesel emission control strategies in specific situations. Entities subject to these retrofit requirements must use verified diesel emission control strategies to comply with these requirements. Consequently, these entities will only purchase systems from manufacturers that have obtained ARB's verification. In any event, the proposed regulatory action would make the requirements for verification less stringent than they are now, allowing for more systems to become verified and avoiding the loss of verifications by most currently-verified systems on January 1, 2007. Thus staff does not expect the proposal will result in adverse economic impacts.

The economic impacts of the proposed amendments on the State, affected businesses, and individual fleets are not expected to be significant. Participation in ARB's

verification program is voluntary. Applicants electing to have their diesel emission control systems verified under the requirements of the Procedure choose to do so for financial gain. Verification for these participants translates into increased sales and therefore, increased revenues. For individual fleets subject to ARB's fleet rules, accelerating the verification process should result in additional products being available to meet the requirements of the rules. In some cases this should result in lower compliance costs due to increased competition in the retrofit market, as historically this increased competition for market share has had the effect of lowering unit prices and may result in a cost benefit to the regulated fleets.

Staff's analysis of the proposed amendments indicates that some may result in a minor cost increase, a cost savings, or have no economic impact. Since the proposed amendments do not universally apply to all applicants it is not possible to determine the aggregate economic impact of staff's proposal. For example, an applicant with a system intended to control PM emissions from on-road vehicles will not be affected by staff's proposed changes to the NOx emissions testing procedures. However, an applicant with a system designed to control NOx and PM emissions from off-road equipment may be required to perform additional emissions testing under staff's proposal. This could result in a cost increase when compared to the current requirements in the Procedure.

Staff does not expect a noticeable change in employment, business creation, elimination, or expansion, and business competitiveness in California due to the amendments to the regulation.

Though the monetary increase will be minimal, staff expects affected businesses will pass through the costs of these amendments to their customers. This can be achieved, for example, through higher retail prices for verified DECS. However, any increases in retail prices will likely be offset as a result of additional verified DECS being available in the marketplace, increasing pressures to reduce overall retail price. The Executive Officer has made an initial determination that the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or businesses directly affected or on representative private persons.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action will not affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within California, or the expansion of businesses currently doing business within California. An assessment of the economic impacts of the proposed regulatory action can be found in the ISOR.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will not affect small businesses because participation in the Procedure is purely voluntary. There are no cost impacts that a representative private

person or business would necessarily incur in reasonable compliance with the proposed action.

The Executive Officer has also determined, pursuant to Government Code section 11346.5(a)(8), that the proposed regulation will not have a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states because the proposed regulation will have no regulatory effect on business.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the ARB's Executive Officer has found that the reporting requirements of the regulation which apply to businesses are necessary for the health, safety, and welfare of the people of the State of California.

For the reasons set forth in the Notice, the Staff Report, in staff's comments and responses at the hearing, and in this FSOR, ARB has determined that no alternative considered by the agency, or that has otherwise been identified and brought to the attention of the agency, would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective or less burdensome to affected private persons than the adopted regulation.

II. SUMMARY OF COMMENTS AND AGENCY RESPONSES

Oral Comments Received at the Board Hearing

At the January 24, 2008 hearing, oral testimony was received from:
Rasto Brezny – Manufacturers of Emission Controls Association (MECA)
Julian Imes – Donaldson Company Inc. (Donaldson)
Donel Olson – Olson Ecologic Engine Test Laboratory (Olson)
Kevin Brown – Engine Control Systems (ECS)
Tom Swenson – Cleaire Advanced Emission Systems (Cleaire)

Below is a summary of each comment made regarding the proposed regulatory actions, together with an agency response. The comments have been grouped by topic wherever possible. Comments not involving objections or recommendations specifically directed towards the rulemaking or to the procedures followed by ARB in this rulemaking are generally not summarized below. Additionally, any other referenced documents are not summarized below.

A. Unidirectional Device Design and Installation

1. Comment: We feel that the additional requirements of reengineering the design of devices to allow only one installation direction will add significant costs; it will

tie up resources of both ARB and the manufacturers and therefore delay new verifications. (MECA)

2. Comment: We are very happy with the content of the staff presentation and what they have discussed so far about the unidirectionality. This is a significant change that needs some further discussion. We have already put in place a system that labels all level 3 DECS with flow direction labels. It is not just the cost of tooling that concerns us, it is implementation, resource commitment, part redesign, part number updates, bills and materials and preparation for the change. We would really look forward to discussing with staff further about how to implement that for the success of the program. (ECS)
3. Comment: We have always labeled our filters with a direction arrow. We currently have a product that was designed to meet unidirectional flow requirements and we did not experience a big cost impact, any issues with handling or user acceptance. So, on this issue in particular, we would really like to strongly support the adoption for the health of the community. (Cleaire)

Agency Response: We disagree with these comments in part and agree with them in part. ARB agrees that adding a requirement of unidirectionality may result in some additional financial costs and logistical considerations on the part of DECS manufacturers. However, as indicated in the Staff Report, staff does not believe that the additional costs are significant. That discussion is incorporated by reference here. In addition, the unidirectionality requirement will provide significant benefits, which include reduced health effects from exposure to accumulated filter ash (a hazardous material), additional emission reductions, and improved device durability. In an effort to ease the transition for DECS manufacturers, staff included a phase-in period for compliance.

B. Warranty

1. Comment: We ask further clarification on how device swapping will impact device warranties. (MECA)

Agency Response: We agree with this comment. While the proposed amendments do not affect or modify the warranty provisions as provided in the Procedure, based on comments received, staff agrees that clarification of how device swapping will impact device warranties is appropriate. As such, staff provided clarification of these provisions in the “Modifications to the Original Proposal - Notice of Modified Text”, which was made available for a supplemental 15-day comment period.

C. Non-Road Transient Cycle Testing

1. Comment: Our laboratory has the capability to measure Non-Road Transit Cycle (NRTC) results in our transient test cell and of course steady state test results. Our clients contend that the differences between NRTC and steady state tests

will be quite difficult to overcome in terms of current design. We caution our clients that they need clarification to some extent on this issue and perhaps more independent testing on behalf of ARB. We can share information from our experience on the differences between NRTC and testing. (Olson)

Agency Response: We disagree with these comments in part and agree with them in part. ARB staff agrees that the differences between a steady state test and the NRTC are significant, which is part of the rationale behind staff's proposal to switch to this NRTC cycle. However, given the significant research done to date both by the United States Environmental Protection Agency (U.S. EPA) and ARB, staff believes that the new requirements will provide for a test that is both achievable and more indicative of real world emissions. ARB will provide guidance to applicants in the implementation of the requirements as they pertain to NRTC.

2. Comment: We believe there are issues with the implementation of the NRTC because ARB is going some place where people have not gone yet. Engine manufacturers have not been in that situation yet and there will be issues that will continue to need discussion. We support any activity by ARB staff to conduct further testing with the NRTC and produce information that can be shared publicly. Additionally, both the EPA and ARB have adopted the use of NRTC for all off-road vehicles as a certification standard cycle. (Olson)

Agency Response: We disagree with the comment that there are issues with the implementation of the NRTC. Staff's proposal for the use of the NRTC is based on U.S. EPA's technical feasibility, in-depth analysis of the NRTC, and its applicability to off-road equipment and engines which indicates that there should be no appreciable issues with its implementation.

D. Labeling

1. Comment: We recognize the need for proper labeling and record-keeping of devices that are out in the field. We are concerned, however, that the proposal does not adequately prevent abuse of the labeling system, thus making enforcement more difficult. We want to continue to work with staff to develop a labeling system that will address these issues. (MECA)
2. Comment: The labels that currently are required to be on the DECS and engine are identical. It is our position that they should be visually different from each other. It is important due to the potential for fraudulent uses that were intended to go on an engine and end up being used on a fraudulent device. (ECS)

Agency Response: We disagree with these comments in part and agree with them in part. Staff recognizes the potential for problems that exist for the abuse of DECS labels. The proposed changes to the procedure and the diligence of manufacturers should help minimize these potential problems and abuses. The regulation currently requires all DECS to have identical labels attached to both the device and the

vehicle engine. ARB staff plans to strictly enforce the requirement that both labels be present. This effort, in coordination with strict controls on behalf of applicants to issue replacement labels appropriately, should dramatically lessen the potential for fraudulent device installations and labeling.

E. Miscellaneous

1. Comment: We support ARB's proposed amendments to the verification procedure. While in the past there have been allowances of verification of total PM, which includes crankcase and tailpipe PM control, the proposed amendments do not specifically address or recognize the emission reduction benefits of crankcase PM control. We request ARB develop guidelines for verifying crankcase PM controls as verified DECS, either alone or in combination with tailpipe PM devices. (Donaldson)

Agency Response: This comment is not direct to the proposed amendments. However, current in-use diesel engine regulations implementing the provisions of the DRRP direct ARB to control and reduce tailpipe diesel PM emissions. The composition of crankcase emissions is not primarily composed of tailpipe diesel PM and as such not directly applicable to the provisions in the Procedure.

2. Comment: We ask the board to commit additional qualified resources to the verification program as quickly as possible in order to handle the increasing complexity of devices to deliver both PM and NOx reductions. Also, ARB must be able to handle more than one verification from a manufacturer at a time in order to meet the emission targets and deadlines from existing regulations. (MECA)

Agency Response: This comment is not direct to the proposed amendments. Staff continually evaluates resources and staffing, and will continue to do so as it relates to the verification program.

3. Comment: This is intended as information, not a stance for or against notification light placement. A reason the light panel may end up on the rear of the vehicle is because as a light goes off (indicating maintenance required) drivers tend to use it as a reason to quit working for the day. However ARB chooses to address this matter, we will support it, we just want to make you aware of the situation. (Cleaire)

Agency Response: We disagree with this comment. Staff believes that immediate driver notification of DECS device status is necessary for continued proper device functionality and to avoid potential effects of vehicle operation. As such, warning lights must be in a visible line of sight for the operator/driver to see them. Staff believes that how an operator responds to the warnings is an operational protocol to be decided by the individual fleets.

Written Comments Submitted During the 45-Day Comment Period

During the initial 45-day comment period, written comments related to the proposed rulemaking were received from the following interested parties. Most of these comments were provided orally at the Board hearing, and are have already been responded to above.

Rasto Brezny – MECA
Jarrod Kohout – Boshart Engineering Inc. (Boshart)
Glenda Rivera - No affiliation stated (Rivera)
Jamie Song – MECA

In addition, comments were also submitted by the individuals listed below that did not involve objections or recommendations specifically directed towards the rulemaking or to the procedures followed by ARB in this rulemaking, or were comments in support of the regulatory action. These comments are not summarized.

Timothy Vargo – No affiliation stated
Jack Goodby – Goodby Grading Inc.
Mark Garrison – MG Constructors & Engineers Inc.
Scott Murphy – No affiliation stated
Michael Fletcher – Repair Business Owner
Ron Harder – No affiliation stated
Kenny Percy – Owner operator
Ron Ringler – Truck driver
Erik Peterson – Voter
Robert V. Jones – No affiliation stated
Daniel Prince – No affiliation stated
Kevin Brown – Engine Control Systems
Barry Wallerstein – South Coast Air Quality Management District
Irina Krivoshto – UC Davis School of Medicine
Jerry Ferdum – G & L Brock Construction Inc.

Below is a summary of the comments submitted, followed by an agency response.

1. Comment:

Dear Board Members,

I have read through the proposed amendments and believe that they've been well thought out. I would like to comment however on the segment related to the proposed changes to Conditional Extensions. I'd like to recommend changing the provisions of the Conditional Extension so that it works both ways. It currently only allows DECS to be conditionally extended from off-road to on-road. I'd like to recommend that provisions be drafted so that DECS can be conditionally extended from on-road to off-road. I think conditional extensions

are extremely important as a way to encourage manufacturers to obtain verification for both types of test cycles. (Boshart)

Agency Response: We disagree with this comment. Since a process to obtain conditional verifications for off-road equipment is already in place and is being utilized by DECS manufacturers, staff believes that implementing such a change is not necessary.

2. Comment: Under the Conditional Extensions, I recommend changing the provisions of the Conditional Extension so that it works both ways. As it currently stands now, it only allows DECS to be conditionally extended from off-road to on-road. I strongly recommend that the provisions be drafted to allow DECS to be conditionally extended from on-road to off-road, as well. (Rivera)

Agency Response: We disagree with this comment. Since a process to obtain conditional verifications for off-road equipment is already in place and is being utilized by DECS manufacturers, staff believes that implementing such a change is not necessary.

III. MODIFICATIONS TO THE ORIGINAL PROPOSAL - NOTICE OF MODIFIED TEXT

At the January 24, 2008, hearing, the Board approved the originally proposed amendments and staff's proposed modifications to the amendments, and directed staff to work with stakeholders to further clarify the provisions for allowing end-users to install used systems on different vehicles and identify clear installation requirements. The following is a description of those modifications and clarifications, by section number.

Section 2701. Definitions.

(a)(11) Staff provided a definition to "Common Ownership Fleet" in order to provide clear guidance to fleet operators in situations when the need to move components arises.

(a)(12) Staff provided a definition for "Component Swapping" in order to provide clear guidance to fleet operators in situations when the need to move components arises.

(a)(28) Staff provided a definition for "Re-designation" to help provide clear guidance in instances where a DECS needs to be transferred to a different engine/application.

(a)(33) Staff provided a definition for "Unidirectional Device Design and Installation" for clarification during the device verification application process.

(a)(34) Staff provided a definition for "Used Device" to clarify the differences between a new and used DECS.

Section 2702. Application Process.

(d)(2)(2.1.5) Staff included a provision for the applicant to include a description of measures taken to prevent reverse flow installation in the original application.

Section 2706. Other Requirements.

(i)(1) Staff modified the language to provide a pathway for end-users to swap specific DECS components between the original installed configuration and other vehicles within the commonly owned fleet.

(i)(2) Staff modified the language in order to give applicants the opportunity to allow DECS end-users to re-designate complete DECS systems from one vehicle to another. This section outlines the specific steps applicants and end-users must follow in order to ensure compliance with the terms of the executive order and other applicable regulations.

(i)(3) Staff provided language to clarify the specific requirements for swapping specific DECS components and complete system re-designation in (i)(2) and (i)(3) above, this section outlines the requirements for applicants and end-users that apply to both component swapping and complete DECS systems re-designation.

(i)(4) Staff modified the language to reiterate warranty requirements as outlined in section 2707. Additionally, staff included a provision that requires installers to issue a one (1) year warranty to protect against installation defects in cases where the original device warranty has expired.

(j)(1) Staff modified to language to provide a pathway for applicants to issue a replacement label for an in-use DECS whose engine or device label has been damaged or destroyed. This section outlines the requirements for applicants who choose to issue a new label clearly identified as a "Replacement Label".

IV. SUMMARY OF PUBLIC COMMENTS AND AGENCY RESPONSES - NOTICE OF MODIFIED TEXT

During the 15-day comment period, written comments were received from the following interested parties:

Rasto Brezny – MECA
Jeff McDonald – RigMaster Power Corporation (RigMaster)

In addition, comments were also submitted by the individuals listed below that did not involve objections or recommendations specifically directed towards the rulemaking or to the procedures followed by ARB in this rulemaking, or were comments in support of the regulatory action. These comments are not summarized.

Leo Picollo – Business owner
Louise Palmer – Business owner
Anthony Fucaloro – No affiliation stated
James Enstrom – No affiliation state

Below is a summary of the comments submitted, followed by an agency response.

1. Comment: We ask that ARB further characterize the resale of VDECS to allow for the sale of VDECS at the end of their useful life for the purpose of recycling the precious metals and other components. (MECA)

Agency Response: We disagree with this comment. There are currently no regulatory or statutory prohibitions restricting the recycling of DECS and the subsequent precious metal recovery at the end of their useful life. ARB staff feels that further clarification is not necessary.

2. Comment: As an APU manufacturer currently in the process certifying a DECS, the amendments made to Chapter 14 are of great interest to me and my company. I am particularly interested in Component Swapping and Re-Designation Practices as it will affect the maintenance infrastructure, as well as its efficiency and quality for the end user.

While this addition will greatly affect large ownership maintenance practices, it appears to have disregarded the independent owner-operator who may only have one DECS enabled auxiliary power unit. While some business does come from large fleets, the greater part of sales is done through dealer locations where individual units are sold and installed. By only allowing ownership fleets to swap out DPF's during maintenance procedures, you are effectively creating a double standard. A fleet will simply have the luxury of removing the uncleaned DPF and having a new one installed, of course following the provisions set forth by the ARB. Swapping a DPF occurs very quickly, thus allowing the truck to be on the road in a matter of an hour. However, for an independent operator who may only have one APU enabled DECS, it would require the operator to go to a dealer location, have the filter removed, sent to the cleaning facility, cleaned, shipped back and then installed.

This is a procedure that could take days or weeks depending on the volume of units in the marketplace, scheduling, etc. If dealers were permitted to carry a stock of new and re-conditioned DPF's available for swapping, you are in essence giving the owner-operator the same benefits as those given to the larger fleets. This scenario provides customers with an easy, efficient and most importantly cost effective service procedure. If the current amendments are allowed to stand, the independent owner is basically forced to purchase 2 DPF's. This method is not cost effective, and will only deter users from adopting these types of emission reduction strategies. I strongly recommend that further

amendments be made to Chapter 14: Component Swapping and Re-Designation Practices, which will encompass all DECS users and not just ownership fleets.

As long as proper tracking and maintenance procedures are followed, there is no reason why the same practices set forth in the current amendments cannot be extended for dealer locations and/or DECS product lines. (Rigmaster)

Agency Response: We disagree with this comment. ARB staff believes that allowing the dealer network the capability of carrying additional units would be detrimental to fleet operators in the long run. Given the fact that there is a continually expanding variety of systems with different formulations, sizes and duty cycle capacities, it is extremely difficult and complicated for device manufacturers to comply with their regulatory responsibility to issue an installation and durability warranty covering a DECS. Improper installation may result in damage to the DECS or engine, and create the potential for applicants to void warranties based on erroneous DECS selection. It is ARB's responsibility to structure the Procedure such that it provides device manufacturers a reasonable ability to meet their warranty and in-use compliance obligations.

V. ECONOMIC IMPACTS

The economic impacts of the proposed amendments on the State, affected businesses, and individual fleets are not expected to be significant. Participation in ARB's Verification Program is voluntary. Applicants electing to have their DECS verified under the requirements of the Procedure choose to do so for financial gain. Verification for these participants translates into increased sales and therefore, increased revenues. For individual fleets subject to ARB's fleet rules, accelerating the verification process should result in additional products being available to meet the requirements of the rules. In some cases this could result in lower compliance costs through increased market competition. Historically, this increased competition for market share has had the effect of lowering unit prices and may result in a cost benefit to the regulated fleets.

Staff's analysis of the proposed amendments indicates that some may result in a minor cost increase, a cost savings, or have no economic impact. Since the proposed amendments do not universally apply to all applicants it is not possible to determine the aggregate economic impact of staff's proposal. For example, an applicant with a system intended to control PM emissions from on-road vehicles will not be affected by staff's proposed changes to the NOx emissions testing procedures. However, an applicant with a system designed to control NOx and PM emissions from off-road equipment may be required to modify the design of their DECS to prevent reverse flow installation. This could result in a cost increase when compared to the current requirements in the Procedure. The remaining changes associated the 15-day notice are mainly procedural and should have no adverse economic impact on the affected businesses. Since no direct emissions benefits are associated with staff's proposal, no cost effectiveness analysis could be performed.