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Arnold Schwarzenegger
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TO: All Interested Parties

SUBJECT: INTERIM VERIFICATION PROCEDURE FOR RETROFIT SYSTEMS TO REDUCE HYDROCARBON AND OXIDES OF NITROGEN EMISSIONS FROM OFF-ROAD LARGE SPARK IGNITION ENGINES AND EQUIPMENT GREATER THAN 25 HORSEPOWER

The 2003 State Implementation Plan (SIP) for the South Coast Air Basin commits the staff of the California Air Resources Board (ARB) to propose regulations that reduce emissions from off-road large spark ignition (LSI) engines greater than 25 horsepower. The SIP commitment includes a measure setting new emission standards at zero or near-zero levels that could be met by new electric forklifts, and reducing hydrocarbon (HC) and oxides of nitrogen (NOx) emissions from uncontrolled LSI engines through retrofits. The SIP commitment also directs the ARB staff to propose new engine emission standards for off-road LSI engines that harmonize with the U.S. Environmental Protection Agency 2007 emission standards. Staff is proposing a consolidated LSI regulation to achieve the SIP emission targets.

The ARB is scheduled to consider the staff's proposed regulation to reduce emissions from off-road LSI engines in summer 2005. The staff's proposed regulation contains emission standards for new engines, fleet average emission and retrofit requirements, and a protocol to verify emission reduction performance of retrofit systems for off-road LSI engines. Under the proposed fleet requirement, fleet owners would have to comply with declining fleet average emission levels for their LSI engines and equipment starting in 2009. One strategy fleet owners could use to comply with the proposed requirements would be to retrofit existing uncontrolled engines to reduce the HC and NOx emission levels from those engines. Some fleet owners have started to evaluate strategies to meet the proposed fleet requirements and have inquired about the availability of retrofit systems they could use to reduce their fleet emission levels. Also, some retrofit system manufacturers have indicated an interest in having an interim verification procedure available that they could use to apply to ARB for verification of their retrofit systems before the proposed new retrofit verification protocol becomes effective.

ARB staff recognizes the value of obtaining early reductions of HC and NOx emissions from off-road LSI engines, and the importance of having a procedure available that manufacturers could use to verify their retrofit systems. Thus, ARB staff has developed an optional interim verification procedure to verify manufacturers' emission reduction claims for their off-road LSI retrofit systems. This interim procedure is a preliminary version of the staff's proposed retrofit verification protocol that is scheduled for ARB's consideration in summer 2005, as part of the proposed LSI regulation mentioned in the preceding paragraphs.

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our Website: <http://www.arb.ca.gov>.

California Environmental Protection Agency

The interim procedure provides manufacturers an opportunity to accelerate the introduction of commercial retrofit systems, thereby allowing fleet operators to achieve early emission benefits.

To verify a retrofit emission control system, a manufacturer must comply with all provisions specified in the interim verification procedure. Upon satisfactory review of the information submitted, the ARB will provide the manufacturer with an interim verification of emission reduction claims for its retrofit system. Fleet owners may install the interim verified retrofit system on their engines and equipment to comply with the fleet average emission and retrofit requirements. Fleet owners may also be eligible to receive Carl Moyer Program incentive funds for the purchase and installation of verified retrofit systems.

Since the interim procedure is based on the staff's proposed retrofit verification protocol that has not been adopted by the ARB, there is a possibility that some differences may exist between the interim procedure and the final protocol. A manufacturer with an interim verification will have to comply with any additional requirements from the final adopted verification protocol in order to continue marketing a retrofit system in California.

The following criteria summarize the discussion presented above and lay out additional criteria for a manufacturer verifying its retrofit system under the interim verification procedure.

Interim Verification Criteria for LSI Retrofit Systems

Retrofit System Manufacturers (Applicants):

(Note: Typically the "applicant" for verification of a retrofit system will be the manufacturer or assembler of the system. The term "applicant" as used herein refers to the entity that applies for verification and is used interchangeably with the term "manufacturer".)

1. An applicant must submit all required information as specified in the interim verification procedure.
2. Upon satisfactory review of the information submitted, the ARB will provide the applicant with a letter stating the classification of the verified interim retrofit system and validating the emission reduction claims (percent reduction or absolute emission level) of the retrofit system.
3. An applicant will need to agree to comply with all the requirements contained in the interim verification procedure, including, but not limited to, warranty, labeling, and in-use compliance requirements.
4. After an applicant has obtained the ARB's interim verification for a retrofit system, the applicant may market its retrofit system for sale in California as having been verified by the ARB on an interim basis and as having the approved emission reductions. An applicant that has an interim verification may manufacture, supply, or offer for sale the verified retrofit system prior to July 1, 2006. The applicant will affix a label to its retrofit system identifying the system as having received ARB's interim verification along with the approved emission reduction performance level.

Applications: Mail Off-road LSI retrofit system verification applications to:

Air Resources Board
Attn: Mr. Robert H. Cross, Chief
Mobile Source Control Division
9528 Telstar Avenue
El Monte, California 91731

Fleet Users:

1. With respect to any retrofit system that has been verified under the interim procedure and purchased by the fleet user before July 1, 2006, the fleet user may continue to use the system on its equipment and may continue to count the interim verification emission reduction levels for the purpose of the fleet average or retrofit requirements if the retrofit system was installed no later than December 31, 2006.
2. After December 31, 2006, a fleet user will not be permitted to install a retrofit system that has been verified under the interim procedure, unless the system is verified under the adopted retrofit verification protocol and complies with all applicable requirements.
3. A fleet user may be eligible to receive Carl Moyer Program funding for the purchase and installation of verified retrofit systems (either interim verification or full verification) for its LSI equipment if all of the eligibility criteria established for that program are met.

We welcome your participation. If you have general questions or comments, please contact Ms. Robin Myers, Air Pollution Specialist, at (916) 322-6973 or email at rmyers@arb.ca.gov.

Sincerely,



Robert H. Cross, Chief
Mobile Source Control Division

Attachments:

- (1) Draft Interim Verification Procedure for LSI Retrofits
- (2) Interim Verification Process Flowchart
- (3) Interim Verification Testing Flowchart