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TO: California Transit Association and Transit Agencies

SUBJECT: TRANSIT BUS FLEET RULE IMPLEMENTATION UPDATE

On April 26, 2001, the California Air Resources Board (ARB) held a public workshop to provide transit agencies with an update on implementing the Transit Bus Fleet Rule. For those who could not attend the workshop, following is a detailed summary of some major issues addressed. In addition, provided at the workshop and posted to our web site is a summary of the reporting requirements of the regulation. ARB will make forms available on its web site prior to January 1 of each year that incorporate each of the reporting requirements for the relevant year. You should regularly check our web site for updates on implementation: www.arb.ca.gov/msprog/bus/bus.htm.

We are scheduled to update our Board on implementation of the rule at the September 20-21, 2001 meeting. The issues we will be covering will include: general implementation; status on transit agencies meeting the October 1, 2002, fleet average; an analysis of applications for the alternative oxides of nitrogen (NOx) strategy; the status of advanced aftertreatment technologies for retrofit; and the status of the hybrid-electric bus test method development. You are welcome to attend the public meeting, which will be held in Sacramento.

Path Selection §1956.2 (a)

All transit agencies operating urban transit buses were required to declare their compliance path, either diesel or alternative fuel, by January 31, 2001 to the ARB Executive Officer. There is no provision in the regulation for changing the path, once selected. The regulation allows transit agencies on the alternative fuel path to purchase diesel buses at a rate of no more than 15% of the total purchases each year.

The rule does allow transit agencies on the alternative fuel path to request a deviation from the purchase requirement provided the request is submitted in writing and approved by the ARB. The request must be approved at least 90 days prior to the purchases of alternative-fuel buses. The request must include the reason for deviation

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and future alternative fuel purchase plans. For example, a transit agency may request permission to purchase 100 compressed natural gas buses in year one and 15 diesel buses in year two, thus rendering the average annual purchases of alternative fuel buses at 85% or more of the total purchases over those years.

Alternative NOx Strategy – Sections 1956.2 (c)(8) & (d)(7)

Transit bus engines are required by the regulation to meet the 0.5 NOx and 0.01 particulate matter (PM) standards for the 2004 – 2006 model years, but the Engine Manufacturers Association (EMA) and its members have told the ARB that they will not be manufacturing engines to this standard. During rule development, the ARB, with input from the EMA, developed an alternative strategy for compliance which allows transit agencies to apply for an exemption from purchasing engines that meet these requirements. The following is the only mechanism allowed by the law for transit agencies to purchase non-complying diesel engines from 2004-2006.

The rule has three parts. First, each transit agency that needs an exemption must apply by June 30, 2001. If the transit agency does not apply, then by default it no longer has this option and may not purchase diesel engines during this time period (unless the engine meets the standards, which diesel-electric hybrids may). Second, the transit agency must demonstrate that it will achieve NOx reductions each year through 2015 greater than would have been achieved through compliance with the engine standard. Finally, the ARB must make a finding that transit agencies are demonstrating advanced NOx aftertreatment technologies. The ARB has 90 days to approve or disapprove the exemption requests.

An issue has arisen regarding the NOx aftertreatment technology demonstration. Some transit agencies may have only recently made the decision to apply for the exemption, and do not have time to contract for a demonstration program by June 30, 2001. In this case, the ARB would consider granting a conditional approval, provided the transit agency lays out in its application a plan for making the demonstration. Final approval would be contingent on follow-through. No transit agency, however, will obtain final approval unless NOx aftertreatment devices are being adequately demonstrated in transit fleets within California. ARB recommends that transit agencies work with their engine supplier, ARB, and others to ensure adequate demonstrations will be taking place.

NOx Fleet Average § 1956.2 (e)

The regulation states that, beginning October 1, 2002, no transit agency may own, operate, or lease an active fleet of urban buses with average NOx emissions in excess of 4.8 grams per brake horsepower-hour, based on engine certification standards. While most transit agencies made this demonstration correctly to the ARB with their initial reporting, some did not. For example, some included non-urban buses in the calculation; some used measured emissions, rather than certification standard emissions; and some did not demonstrate that they would achieve the 4.8 g/bhp-hr upper limit by October 1, 2002. The ARB staff will be contacting those transit agencies with deficiencies to obtain the correct information later this year.

Note that if a transit agency wants to count zero-emission buses that do not meet the definition of an urban bus in its active fleet for the purpose of meeting the 4.8 g/bhp-hr fleet requirement, that transit agency must apply to ARB with a written request to do so by January 31, 2002.

Diesel Particulate Matter Retrofit § 1956.2 (f)

The regulations require transit agencies to retrofit diesel buses in their active fleets and to operate all diesel buses on low-sulfur fuel (<15 ppm sulfur). Retrofit devices used must be verified by ARB as per the Retrofit Verification Procedures (for further information on the Retrofit Verification Procedures, please refer to the website at www.arb.ca.gov/diesel/mobile.htm#retrofitassess). The first deadline is January 1, 2003, at which time 100% of all pre-1991 diesel buses on either path must be retrofitted. In addition, for transit agencies on the diesel path, 50% of 1991-1995 model year (MY) diesel buses, and for transit agencies on the alternative fuel path 20% of 1991-1995 MY diesel buses, must be retrofitted by January 1, 2003. The phase-in schedule continues through 2009 and is spelled out clearly in the regulation.

The use of low-sulfur fuel is required of all transit agencies, on either path, by July 1, 2002. The regulation allows an implementation delay allowed for small transit agencies operating in federal one-hour ozone attainment areas.

The rule set forth some exemptions and implementation extensions. Pre-1991 buses that have already been retrofitted, using an ARB-certified kit, to 0.1 g/bhp-hr to meet the requirements of the United States Environmental Protection Agency urban transit bus rebuild and retrofit program are exempt from further retrofit requirements. Transit agencies with fewer than 20 urban buses, and that operate in a federal one-hour ozone

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attainment area may delay retrofitting as outlined in the rule. Finally, if a retrofit device will not be available within six months prior to the dates specified for an urban bus, the transit agency may apply in writing for a one year delay, so long as the transit agency applies 30 days before the retrofit deadline and the application is approved.

A number of transit agencies have inquired about the availability of verified PM retrofit devices. Thus far, ARB has received applications from several vendors for PM aftertreatment device verification. In addition, there are ongoing demonstrations of PM retrofit devices in transit buses, and New York City is in the process of retrofitting its fleet with over 500 buses that have been retrofitted. The ARB is closely following all developments and will know which, if any, buses cannot be retrofitted. In the event that the ARB knows in advance that there will not be a specific retrofit device for a particular category of urban transit bus, the ARB will notify the transit agencies and consider providing a one year blanket delay.

In the event that an approved retrofit device is not available for a particular engine type, necessitating a one year delay, the transit agency will still be responsible for retrofitting the applicable percentage of its entire fleet, despite the delay granted to one engine family.

Zero-Emission Bus Demonstration § 1956.3

As specified in the regulation, transit agencies on the diesel path with more than 200 urban buses in its active fleet on January 31, 2001 need to implement a zero-emission bus demonstration project. Please refer to the regulation for further details on the requirements.

If any transit agency needs assistance in initiating the demonstration or has questions on the regulation, please contact Ms. Dinh Quach, Staff, Retrofit Implementation Section, by e-mail at dquach@arb.ca.gov or by phone at (626) 350-6485, or Dr. Nancy Steele, Manager, Retrofit Implementation Section, by e-mail at nsteele@arb.ca.gov or by phone at (626) 350-6598.

Sincerely,

/S/

Robert H. Cross, Chief
Mobile Source Control Division