



**California  
Natural Gas Vehicle  
Coalition**

**Michael L. Eaves**  
*President*

March, 22, 2006

Air Resources Board Members  
Air Resources Board  
1001 I Street, 23<sup>rd</sup> Floor  
Sacramento, CA 95814

Dear Air Resources Board Members:

**Subject: Comments on Agenda Item 06-3-2**

**Relaxing the Regulations:**

The California Natural Gas Vehicle Coalition (Coalition) would like to offer these comments regarding proposed amendments to the verification process for diesel particulate filters and the relaxing of the NO<sub>2</sub> limits for level 1, 2, and 3 control devices.

The Coalition does not feel that relaxing the NO<sub>2</sub> standard is the correct move given CARB's recognition that some control devices on the market are capable of meeting the current NO<sub>2</sub> slip requirement of 20%. The creation of a "Level 3 Plus" category is in recognition that some manufacturers are exactly where CARB wants them to be regarding performance of their PM control technologies. Designation of "Plus" performers without requiring this technology to be used is just a smokescreen to accept lesser performance from other manufacturers. CARB's staying the course with its existing regulations will do more to push manufactures into compliance that relaxing the standards until 2009.

The marketplace is best served by the best technologies setting the standards for other manufactures entering the marketplace. Revision of the CARB regulations in the manner proposed devalues excellent technology and forces the market to accept less than the best. Achieving "Level 3 Plus" status and recognition that this is regarded as Best Available Control Technology (BACT) but not having regulators require the technology, does not send the right signal to the marketplace that regulators want these technical issues resolved in new products.

The natural gas vehicle industries has experienced this same treatment through the Transit Rule regulations where CARB acknowledged the fact that natural gas engines were cleaner than diesels and were planning to meet the 2010 standards and 2007 – but wouldn't stay the course on their

2007 emissions for transit buses. Manufacturers that can meet the existing NO<sub>2</sub> standards for particulate control devices should have the current standards reinforced – not relaxed.

**Emission Modeling:**

Staff has indicated that it has modeled the impacts of the relaxed regulation and have deemed the environmental degradation minor. The Coalition recently became aware of a July 2005 CRC report (Project E-55/59 Phase 2 Final Report, July 12, 2005) that indicates that in-use NO<sub>x</sub> emissions from heavy duty trucks are much higher than anticipated given the lower engine certification requirements that have been implemented over the years. The following two tables from the report show in-use NO<sub>x</sub> readings in grams per mile for newer engines to be similar to the emissions from much older engines (1986 and 1989) even though certification standards for engines are much lower today.

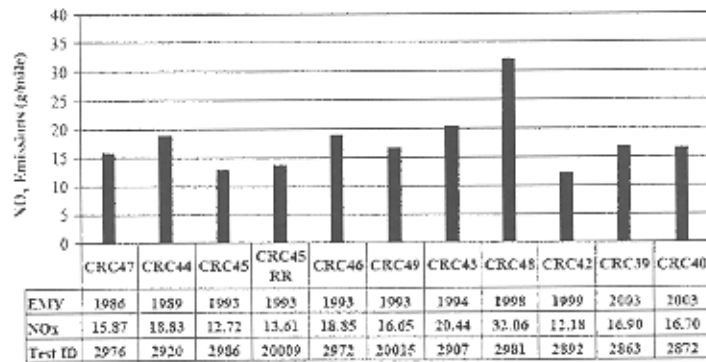


Figure 3: NO<sub>x</sub> emissions for the Transient (Trans3) Mode (56,000lb.).

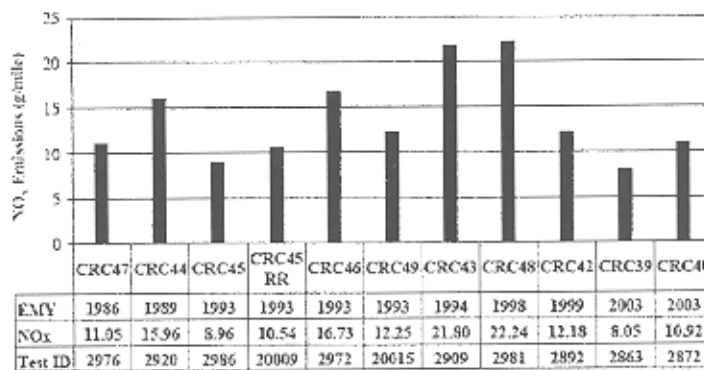


Figure 4: NO<sub>x</sub> emissions for the HHDDT\_S Mode (56,000lb.).

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The Coalition questions whether these much higher in-use NO<sub>x</sub> emissions have been factored into the NO<sub>2</sub> modeling effort as the higher in-use emissions documented in the report will substantially change NO<sub>2</sub> modeling results.

The Coalition also questions whether the NO<sub>2</sub> modeling reflects the roadside emissions modeling for congested urban areas as ground level NO<sub>2</sub> emissions have been found to be a factor in London where PM traps are common. Did the modeling also look at the NO<sub>2</sub> impacts on the interior of school buses (as PM retrofits are a high priority for the Clean School Bus Program).

**Other Emission Modeling Issues:**

The CRC report referenced also brings into question other modeling issues with EMFAC. If in-use emissions for newer engines are much higher than previously thought, and staff has indicated that it has modified EMFAC accordingly, then why don't current emissions inventories for various APCDs reflect much higher NO<sub>x</sub> levels. How could the model be modified without emission inventories going up.

**Conclusions:**

The California Natural Gas Vehicle Coalition believes relaxing the NO<sub>2</sub> criteria for diesel particulate control devices is inappropriate given some manufacturers capability to meet the standard as it stands. Changing the criteria penalizes manufacturers that have demonstrated the ability to comply with the current regulations. It also signals to other manufacturers that can't meet the standard that "effort" not "performance" is sufficient to get CARB to relax standards.

The Coalition is also concerned that all the modeling that should have been done in conjunction with modifying the NO<sub>2</sub> slip hasn't been done – especially in light of the CRC study that says NO<sub>x</sub> levels from newer engines are much higher than previously forecast. The Coalition is also concerned that all the ramifications of the CRC study haven't been properly captured in EMFAC and that further discussion of EMFAC changes with the public and regulatory agencies is warranted.

Thank you for this opportunity to submit comments for the record. I am sorry that I won't be able to attend the March 23<sup>rd</sup> Board meeting.

Sincerely,



Michael L. Eaves  
President