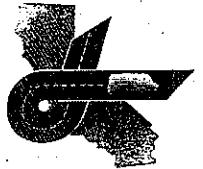


California  
Natural Gas Vehicle  
Coalition



Gregory E. Vlasek  
Executive Director

Monica Alejandrez  
Executive Assistant

September 5, 1995

STATE OF CALIFORNIA  
AIR RESOURCES BOARD  
RECEIVED 9/7/95  
BY BOARD SECRETARY

Ms. Patricia Hutchens, Secretary  
Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812

15-Day Comment  
TAC  
Legal  
MSD

Chaffey College Center for  
Economic Development

City of Long Beach  
Gas Department

Energy Technology  
Training Center  
College of the Desert

Hurricane Compressors

MESA Environmental

Pacific Gas & Electric

San Diego Gas & Electric

Southern California Gas

unLine Transit

United States General  
Services Administration  
Fleet Management

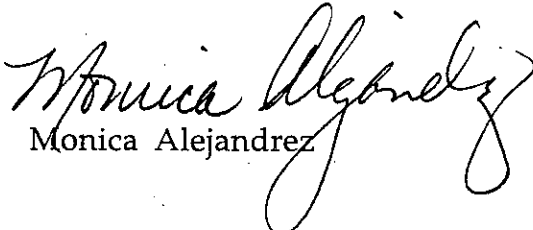
Dear Ms. Hutchens:

Re: Modifications to Amended Retrofit Certification Regulations

The California Natural Gas Vehicle Coalition wishes to go on record in support of the regulatory amendments as modified by the Board July 27, and as distributed by Notice #95-28 dated August 30, 1995. We have been an active participant in the development of these amendments and look forward to their implementation.

The Coalition's membership appreciates the position of the Air Resources Board and is committed to working with the ARB toward cleaner and healthier air.

Very truly yours,

  
Monica Alejandrez

A non profit corporation  
sponsored by California's  
natural gas providers and  
others committed to bringing  
the environmental and economic  
benefits of natural gas to the  
transportation fuel market.

925 L Street, Suite 1485 • Sacramento, CA 95814  
(916) 448-5036 • (916) 448-5732 Fax

Unocal Petroleum Products & Chemicals Division  
Unocal Corporation  
1201 West 5th Street, P.O. 60455  
Los Angeles, California 90060

STATE OF CALIFORNIA  
AIR RESOURCES BOARD  
RECEIVED 9/11/95  
BY BOARD SECRETARY

**UNOCAL** 

September 13, 1995

Ms. Pat Hutchens  
Board Secretary  
California Air Resources Board  
P.O. Box 2815  
Sacramento, California 95812

15-Day Comment  
TAC  
Legal  
MSD

**7/27/95 Board Hearing - 15 Day Package**  
**1994+ Retrofit Certification Procedures**

Dear Ms. Hutchens:

76 Products Company, an operating group of Union Oil Company of California (dba Unocal), submits these comments on the actions taken by the Board at its July 27, 1995 public hearing to amend the California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for Motor Vehicles Certified for 1994 and Subsequent Model Years (herein referred to as the "1994+ retrofit certification procedures"). At the hearing, the Board adopted staff's original proposed amendments and three modifications to the original proposal. Our comments will focus on the first modification of expanding the alternate durability test plan to all vehicle classes and our concern that the program expansion, along with the alternate durability test plan, will result in a negative impact on air quality.

At the hearing, we expressed our concern regarding staff's proposed alternate durability test procedures through written comments and testimony delivered by the Western States Petroleum Association (WSPA). Staff's proposed amendments would allow retrofit kit manufacturers to certify kits and sell them prior to completing the required durability testing. By loosening the durability requirements, CARB is jeopardizing air quality. As explained by staff at the public workshop, the 1994+ retrofit certification procedures were adopted because the previous lack of durability testing resulted in excess emissions over the useful life of the retrofitted vehicle. The 1994+ retrofit certification procedures were intended to ensure that all retrofit systems sold in California are durable and maintain compliance with the applicable emission standards. The adopted amendments reverse the benefits made by the original 1994+ retrofit certification procedures by again allowing vehicles with un-demonstrated durability to be operated and used to generate emission reduction credits.

CARB further compromised air quality by expanding the alternate test plan to all vehicle classes, including light duty vehicles. As stated in the staff report covering the proposed amendments (entitled Proposed Amendments to the Certification Procedures for All On-

Road Motor Vehicle Retrofits and Proposed Optional Retrofit Emission Standards for Heavy-Duty Engines and Vehicles, dated 6/9/95), "[Medium- and heavy-duty vehicles], particularly the heavy-duty vehicles, typically are very stable and show little deterioration in comparison with light-duty vehicles." Expanding the alternate test plan to Category 1 (light duty) vehicles will allow light duty retrofitted-vehicles to operate and generate emission reduction credits, without demonstrating lifetime durability, even though this class of vehicle has been shown to be less durable than the larger size classes. By adopting this modification, CARB is increasing the likelihood that vehicles will be operated within California that exceed the applicable standards.

In response to concerns about the potential negative air quality impact potential of retrofit kits with unproven durability, staff has explained that recall and stop-sale enforcement actions will be taken for problem kits. This response will not mitigate the excess emissions generated between the onset (operation of retrofitted vehicle with a kit which fails its durability demonstration) and correction (recall of the kit) of the emissions problem. During this period, the vehicle will likely exceed applicable standards, and thereby degrade air quality. Worse yet, a stationary source that uses the unproven kits to earn emission reduction credits will likely increase emissions from both the retrofitted vehicles (compared to the applicable standards) and the source in which the credits are applied.

In summary, Unocal is concerned that the amendments to the 1994+ certification procedures will result in a negative impact on air quality in California because they allow retrofit certification kits to be sold and used to generate emission reduction credits before their durability has been proven over the useful life of the retrofitted vehicle. In addition, the modifications to the amendments which were adopted at the July 27, 1995 public hearing further exacerbate the negative impact by expanding the alternate test procedure to light duty vehicles, thereby increasing the likelihood that vehicles will be operated within California that exceed the applicable standards. We recommend that the certification of all retrofit kits for all vehicle classes be held until the kits can demonstrate compliance with the applicable emission standards over the useful life of the retrofitted vehicle.

We appreciate the opportunity to discuss the above concerns. If you have any questions please contact me at (213)977-6692.

Sincerely,



Melissa Sherlock  
Fuels Planning Engineer

cc: James Boyd - CARB Executive Officer



**GOLDEN STATE  
NATURAL GAS SYSTEMS**  
C.L.I. Authorized Distributor

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15-Day Comment  
TAC  
Legal  
MSD

AIR RESOURCE BOARD  
P.O. Box 2815  
Sacramento, California 95812

September 14, 1995

Attention: Board Secretary

Re: MAIL OUT #95-28

Dear Sir:

On behalf of Carburetion Labs Inc., Manufacturer of the KG5000-D and Golden State Natural Gas Systems, the West Coast Distributor, we would like to address the Mail Out #95-28 regarding amendments to the retrofit certification procedures and the adoption of optional retrofit emission standards for heavy-duty vehicle and engines. I am forwarding a letter from the Manufacturer stating their response.

Again, I will close with a Commentary Howard Gleckman - Business Week, July 3, 1995: "And it would better to allow Markets rather than the Government to decide the fate of Products and Companies."

Thank you for allowing us the opportunity to state our opinion regarding the Mail Out #95-28.

Sincerely,

  
Kevin Weddle, President



Carburetion  
Labs  
International  
Inc.

515 N.E. 190 Street  
Miami, FL 33179  
Phone 305/651-2220  
Fax 305/651-9360

September 14, 1995

Mr. Kevin Weddle  
Golden State Natural Gas Systems  
1747 Live Oak Blvd.  
Suite J.  
Yuba City, CA. 95991

Dear Kevin:

I have reviewed CARB Resolution 95-39 as per our conversation this morning. Please find below my comments and suggestions:

It is evident that the central focus of this Resolution does not take into account our type of conversion technology, nor others like it. It is my contention that for our specific niche of the conversion market, the balance of the requirements contained in Resolution 95-39 are at once mis-directed, ill-informed, non-applicable and cost prohibitive. Our promise to our customers as well as to CARB has always been one of simplicity in regards to emissions performance; we will improve upon the emissions performance of the OEM certified engine. We have demonstrated this ability numerous times at various locations throughout the world. In addition, we have provided our customers and CARB with a simple, cost effective means of verifying emissions performance in the field (TLEV test program).

CARB is now requiring us to test a wide range of engines (engine families) for future certifications. I believe that the logic behind this requirement is fundamentally flawed. There are only a limited number of variables we must contend with when working with diesel engines, regardless of engine make, model, family etc. This is the reason why our conversion system is interchangeable between different makes of engine. The major differences between different diesel engines is not the name plate or model, but rather h.p./torque output, fuel delivery system (high or low pressure), aspiration, charge air cooling method and method of fuel delivery at the combustion chamber (direct injection or pre-combustion design).

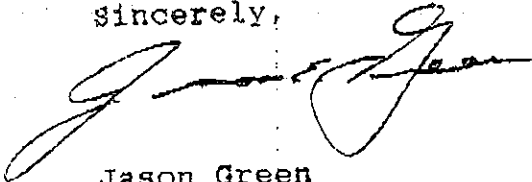
I can assure you, that by testing as few as perhaps 4 different engines, we would be able to cover all of these variables and thoroughly document to CARB, the emissions reducing capability of our conversion systems for 4-stroke diesel engines in the light, medium and heavy duty categories. This testing would not only be scientifically valid, it would also be cost effective for both CLI and CARB. I can assure you that the testing requirements as written will severely hinder AFV aftermarket retro-fit technology development and implementation in California as well as the rest of the country.

09/14/95 16:20 CARBURETION LABS INTL + 9166733561 NO. 429 002

I believe that CARB has taken a very short-sighted approach in its efforts to regulate aftermarket conversion kits. I fail to see why AFV's, which comprise such small percentage of the overall vehicle population, are being dealt with in such a heavy handed manner at this critical juncture. I believe that CARB, as an agency created to help clean the air, should spend more time assisting kit manufacturers in the development of their technologies, rather than regulating them out of existence. If CARB's desire is to "squeeze out" private industry's participation in AFV development, than Resolution 95-39 will certainly bring them closer to their goal.

If you would like to discuss these issues further, please feel free to call me.

Sincerely,



Jason Green  
Vice President

COMMENTS OF THE CALIFORNIA TRUCKING ASSOCIATION  
ON ADOPTION OF AMENDMENTS TO THE CERTIFICATION PROCEDURES  
FOR ALL ON-ROAD MOTOR VEHICLE RETROFITS AND TO CONSIDER  
ADOPTION OF OPTIONAL RETROFIT EMISSION STANDARDS FOR  
HEAVY-DUTY ENGINES AND VEHICLES

The California Trucking Association represents over 2,400 for-hire trucking companies, private carriers and suppliers operating into and within California. At the public hearing on July 27, 1995, the ARB (Board) considered amendments that would streamline the certification process for heavy-duty vehicle retrofits and allow these vehicles to receive mobile source emission reduction credits.

The amendments to the "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for Motor Vehicles Certified for 1994 and Subsequent Model Years" allow the retrofit manufacturers flexibility in validating deterioration factors under the alternate durability test plan and allow the ARB's Executive Officer to disable specific OBD monitoring strategies for which monitoring may not be reliable with respect to the use of alternative fuels.

During the hearing, we testified to problems in purchasing a new alternative fueled vehicle and the need for a chassis/fueling system retrofit. It was determined by ARB staff that a new engine certified with alternative fuel would not fall into this category. With this in mind, CTA supports both the amendments to the certification procedures for all on-road heavy-duty vehicle retrofit and the optional standards.

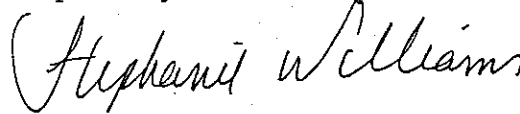
As we have previously stated, we believe some introduction of low emission vehicles in combination with retrofit, scrappage and export is necessary for SIP compliance. Alternatively-fueled heavy-duty vehicles are not commercially available. We can purchase an engine that operates with natural gas, but that engine will not come in a truck body or chassis. The chassis and fueling system must be modified by a third party, the ARB has authority from Health and Safety Code Section 43006 to require certification for this modification and no warranty is provided to the truck purchaser.

The adopted definition of an alternative fueled retrofit system is a package of fuel, ignition, emission control and engine components that are modified, removed or added during the process of modifying a motor vehicle to operate on an alternative fuel. Until alternatively-fueled heavy-duty vehicles become commercially available, this third-party modification to the chassis and fueling system is necessary to provide a vehicle, rather than an engine, that operates on alternative fuel. Based on the hearing record of July 27, 1995, we assume heavy-duty engines certified to optional standards on alternative fuel are eligible for mobile source emission credits and do not fall into a retrofit category.

We would like to work cooperatively with the ARB to eliminate the incremental cost and economic barriers that prevent alternatively-fueled heavy-duty vehicles from market competition. It appears that Section 43006 of the Health and Safety Code may be counter-productive to commercialization and economic competition of alternative-fueled heavy-duty vehicles. CTA commits to work with ARB for removal of the barriers to effective and economic commercialization of alternatively-fueled heavy-duty vehicles.

Dated: September 14, 1995

Respectfully submitted,

A handwritten signature in cursive script that reads "Stephanie Williams". The signature is written in dark ink and is positioned above the printed name and title.

Stephanie Williams  
Manager of Research