COALITION TO BUILD
A CLEANER CALIFORNIA

CLEANING CALIFORNIA'S CONSTRUCTION FLEET
AN ALTERNATIVE PROPOSAL - July 2007

California's Construction Industry

The construction industry in California is not a monolithic industry despite its size and its contribution to the state's economy. Currently, the industry directly employees nearly 1 million workers at more than 70,000 company locations. Yet, almost 90% of construction firms employ 20 or fewer persons making it an industry that surprisingly is comprised of many, very small companies. Additionally, about 168,000 construction firms have no employees, as owner-operators, sole proprietorships and self-employed businesses.

However, those small firms control approximately 28% of the construction equipment in the state. Only 2% of the state's construction companies employ 100 persons or more and they own approximately 36% of the statewide construction fleet. The balance of the firms between 20 and 100 employees own the remaining 36% of the equipment. The cost of the California Air Resources Board's (CARB) proposed regulation falls disproportionately on these small and medium companies.

It is also important to note that 98% of California construction firms generate less than $13 million in annual sales and have fewer than 100 employees. With small profit margins (3 to 5 percent) there are scarce resources available for those firms to comply with the enormous costs of the proposed regulation.

The Impact of CARB's Proposed Rule

CARB estimates there are 180,000 pieces of off-road construction equipment in California today. Approximately 85% of that equipment is Tier 0 or Tier 1 equipment that will all need to be replaced by the end of 2020. This equipment tends to be heavy duty, diesel powered equipment that is designed and maintained to last for decades. As a result of its long life, CARB has decided that it needs to adopt a regulation that will accelerate vehicle turnover well beyond that which is normal for this equipment in order to achieve lower oxides of nitrogen (NOx) and particulate matter (PM) emissions from construction activity.

The CARB staff has proposed a classic "command and control" regulation that will require all construction fleets to meet a strict fleet average emission limit annually. This limit is set for both NOx and PM, and if the fleet does not meet the set limit, it must annually replace, repower or retire 8% (accelerating to 10% in 2015) of their engines to achieve NOx reductions, and an additional 20% of the engines must be retrofitted with a verified diesel emission control system (VDECS) trap to reduce PM. This mandatory turnover and retrofitting

on an annual basis is extremely costly and financially crippling for many companies.

Further, the regulation requires all fleets to begin with the same fleet emission average in 2010. This places an extraordinary burden on older fleets and forces considerable cost on those fleets in the early years of the regulation. For contractors who do not have the money to comply, the only option is to shrink their fleet by disposing of equipment each year until the emission limit can be achieved. We believe that this compliance method will be the most likely strategy for most small and medium sized contractors. Our economic analysis concludes that the state-wide fleet could shrink by as much as 30,000 pieces of equipment. A reduced fleet will limit the size and type of contracts that companies can bid on and will reduce the bonding capacity of those firms to do additional work. It will have a dramatic effect on the cost of construction contracts just as California launches the $40 billion rebuilding bond issue effort approved by the voters in November 2006.

A Coalition to Build a Cleaner California Alternative

Members of the Coalition to Build a Cleaner California have been working with CARB for more than three years on the development of this regulation. We believe there is a better way to achieve the desired emission reductions without the mandated annual emission limits proposed by CARB. In developing this alternative, our goals are simple:

1. Achieve better emission reductions for 2015 than the CARB proposal.
2. Keep the same starting date as the CARB proposal.
3. Require annual reporting to demonstrate progress toward the goal.
4. Provide maximum flexibility for contractors to reach the target.
5. Allow more time at the back-end for new Tier 4 engines to enter the fleet (estimated to be approx. 2014/2015).
6. Recognize the wide divergence in fleet sizes, emissions and capabilities.
7. Permit each fleet to determine how to best achieve the reductions.
8. Give credit to those fleets that provide early reductions for both NOx and PM.
9. Minimize the financial impact to keep the most firms in business.
10. Maintain a highly competitive bidding environment.

The Coalition proposal would have each contractor establish individual fleet emissions and fleet inventories in 2009, the same requirement contained in the current proposal. Starting points would be established in 2010 for large fleets, 2013 for medium fleets and 2015 for small fleets.

However, rather than establishing an annual fleet emission target, the alternative would establish a 2015 emission reduction goal as a percentage of the individual fleet emissions.

For large fleets, the 2015 NOx emission reduction goal would be 32.5% and the PM emission reduction goal would be 47.5% which is slightly more than the 31.23% for NOx and the 46.84% for PM set by CARB's proposal. Each contractor would have to report annually their progress toward the goal, but the required reductions would be a percentage of their starting point. Every large and medium contractor fleet would have the same percentage reduction requirement.

Some contractors would be able to reach the goal sooner than others and would have a head start on the 2020 goals of a 50% reduction in NOx and a 70% reduction in PM. Every large contractor would have to comply with the 2015, 2020 and 2025 goals. The 2025 goals would be a 62.6% reduction in NOx and an 84% reduction in PM for each fleet. Medium fleets would have to comply with the 2018, 2023 and 2028 goals and small fleets would comply with the 2020, 2025 and 2030 goals.

Small fleets would be subject to a similar approach for PM emission reductions only. Required PM reductions would be 35% in 2020, 70% in 2025 and 84% in 2030.

The advantage of this alternative is that contractors can manage their fleet in a fashion most suitable for their financial condition. It allows for a more practical 5-year business planning cycle and it provides each contractor with the flexibility to use the full range of options available such as repowering, retrofitting, replacing or retiring equipment as they see fit. It achieves the same emission reductions at each milestone but it allows each fleet to reduce emissions in direct relation to their total emissions and their starting point.

The most significant difference between the alternative plan and the CARB proposal is moving the 2020 goal for large fleets to 2025. Small and Medium fleets would also be given additional time. We believe that is necessary in order to allow more time for Tier 4 engines, which will not be available in most horsepower ranges until 2014/2015, to enter the market and be acquired by the contractors. Tier 4 engines will achieve all the emission targets without any further retrofitting. It is the most desirable engine and the CARB proposal assumes that roughly half of the California construction fleet will be made up of these engines. Even when these engines are available in the marketplace, it's highly unlikely that 100,000 engines can be introduced to the fleet in 5 years or less as envisioned by the CARB proposal. Additional time will be needed.

The Coalition alternative is designed to fit within the framework established in the draft proposal prepared by the staff. The following outlines the specific changes that would need to be made to the draft proposal to adapt it to the Coalition alternative.

Regulatory Premise

1. Based on the 2010 NOx Target and the 2020 NOx Target in the proposed regulation, CARB seeks to achieve a 62.6% reduction in NOx during this time frame.

2. Based on the 2010 PM Target and the 2020 PM Target in the proposed regulation, CARB seeks to achieve an 84.0% reduction in PM during this time frame.

3. The proposed regulation is too complicated and too prescriptive. It leaves the fleet owner very little flexibility in managing his fleet.

4. The construction industry has requested an additional five years to achieve the remaining 12.6% and 14% of NOx and PM reductions respectively required by the regulation for large and medium fleets primarily to allow more Tier 4 engines to become available for purchase in California.

5. The regulation would be simpler if it established required percentage reductions over time and let fleet managers decide how best to achieve the reductions.

6. The percentage reductions required should be the same overall as those currently envisioned by the regulation.

7. The regulation should have "benchmark" or "interim" requirements for emission reductions throughout the applicable regulatory period. Annual reports submitted by each fleet should include total emission reductions required necessary for the fleet to meet the upcoming compliance goal, the actions taken and reductions achieved to date toward that goal, and the percent of progress remaining to achieve goal.

8. Fleet operators should have to report each year, beginning in 2009, so that progress towards the emission reduction goals can be monitored. Each year, CARB should send a letter to all contractors after annual reports are submitted reminding them of their emission reduction obligations and penalties associated with non-compliance.

9. The 2009 report for each fleet should be used to establish fleet and statewide inventories only, not to establish the Start Points.

10. Fleet size should be revised to reflect the following:

    Small Fleet = 2,500 horsepower or less (remove additional requirement to meet small business definition)
    Medium Fleet = 2,501 horsepower to 10,000 horsepower.
    Large Fleet = Greater than 10,000 horsepower.

11 Start Points should be established using the NOx and PM Index Calculations currently specified in the proposed regulation. For fleets achieving early reductions, the start point may be calculated based on the year the first early reduction occurred.

12 End Points should be calculated based on a percentage reduction from the Start Point.

13 Start Points and End Points will be unique for each fleet.

14 Small Fleets will continue to be subject only to the PM requirements of the regulation.

15. Compliance for all fleets shall be demonstrated as indicated in the table that follows:

Fleet Size and Emission Reduction Requirements

Year	Large		Medium		Small	
	NOx	**PM**	**NOx**	**PM**	**NOx**	**PM**
2009	***Initial Inventory Report - All Fleets***					
2010	***Establish Start & End Point***					
2011						
2012						
2013			***Establish Start & End Point***			
2014						
2015	***32.5% Reduction From Start Point***	***47.5% Reduction From Start Point***			***Establish Start & End Point - PM Only***	
2016						
2017						
2018			***32.5% Reduction From Start Point***	***47.5% Reduction From Start Point***		
2019						
2020	***50% Reduction From Start Point***	***70% Reduction From Start Point***				***35% Reduction From Start Point***
2021						
2022						
2023			***50% Reduction From Start Point***	***70% Reduction From Start Point***		
2024						
2025	***62.6% Reduction From Start Point***	***84% Reduction From Start Point***				***70% Reduction From Start Point***
2026	Maintain Rate	Maintain Rate				
2027	Maintain Rate	Maintain Rate				
2028	Maintain Rate	Maintain Rate	***62.6% Reduction From Start Point***	***84% Reduction From Start Point***		
2029	Maintain Rate	Maintain Rate	Maintain Rate	Maintain Rate		
2030	Maintain Rate	Maintain Rate	Maintain Rate	Maintain Rate		***84% Reduction From Start Point***
2031+	Maintain Rate	Maintain Rate	Maintain Rate	Maintain Rate		Maintain Rate

16. NOx and PM reductions can be achieved the following ways:
    Equipment Replacement
    Equipment Retirement
    Engine Repower
    Retrofit with Verified Diesel Emission Control Systems (VDECS).
    This option applies to both PM and NOx to the levels established in the regulation.

17. This regulatory concept will naturally result in early removal of Tier 0 engines from fleets because fleet managers will receive the most significant percentage emission reductions by replacing or otherwise controlling Tier 0 engines.

18. Credit for emission reductions achieved by fleets that have repowered or replaced Tier 0 engines with Tier 1, 2 or 3 engines beginning March 1, 2000 through the applicable starting point should be granted and applied to the reductions required by Item 15.

    Credit for reductions of both NOx and PM should be granted.

19. Credit for emission reductions achieved by fleets that have retired Tier 0 engines from their fleets between March 1, 2000 through the applicable starting point should be granted and applied to the emission reductions required by Item 15.

    Credit for reductions of both NOx and PM should be granted.

20. New fleets entering California after the time start and end points are established will be required to achieve a pro-rated level of reductions between the date they begin operating in California and their respective end-point date. New fleets cannot include Tier 0 engines, but instead must be comprised entirely of engines less than five (5) years old or engines representing the most current Tier for the engine horsepower.

21. Compliance extensions should be granted for equipment manufacturer delays. This should apply to delays related to both engines and VDECS. Fleet operators who have purchased new engines/equipment or VDECS in order to comply with the regulation will be excused from immediate compliance if the new engines/equipment or VDECS have not been received due to manufacturing delays as long as a purchase order for the engine/equipment or VDECS has been placed at least 6 months prior to the applicable compliance date.

22. Fleets comprised solely of Interim and Final Tier 4 engines need not achieve any further reductions and are deemed in final compliance with the regulation. Fleets comprised solely of Interim and Final Tier 4 engines may add only interim and final Tier 4 engines to their fleet.

Conclusion

We can't emphasize it enough. **The Coalition to Build a Cleaner California alternative plan will result in the cleanest construction fleets in the world**. And it will do so while keeping:

- the most number of construction companies in business and workers employed,
- the bidding environment at its most competitive,
- the Rebuild California bond program on schedule,
- construction cost increases to a minimum.

We believe this alternative approach is superior to the rigid targets set by the CARB proposal. *The construction industry is being asked to do something that no other industry in California has been asked to do – dispose of equipment and assets before their useful life has been completed* and purchase new equipment before it would otherwise be acquired. Given the multi-billion dollar cost of this regulation the construction industry should be at least be given the opportunity to comply in the most reasonable and flexible manner possible. We believe that this alternative is the best way to achieve the desired emission reductions and minimize the cost to achieve the goal.