



*Advanced Emission Controls*<sup>®</sup>

November 30, 2007

Chairman Mary Nichols  
CA Air Resources Board  
1001 "I" Street  
Sacramento, CA 95812

James Goldstene  
Executive Officer  
CA Air Resources Board  
1001 "I" Street  
Sacramento, CA 95812

Re: Board Agenda Item # 07-12-7 "Public Hearing to Consider the Adoption of Proposed Regulation to Control Emissions from In-Use On-Road Diesel-Fueled Heavy Duty Drayage Trucks at Ports and Intermodal Rail Yard Facilities"

Dear Chairman Nichols and Mr. Goldstene:

Cleaire appreciates the opportunity to provide comments on the California Air Resources Board (ARB) proposed Port Drayage Truck Regulation. Please accept this letter as being supportive of the proposed regulation, with two suggested improvements.

As background, Cleaire is a California-based company, and we are a leader in developing the highest-efficiency ARB-verified diesel emission control systems (Level 3 VDECS). These systems have been deployed across a wide range of applications, primarily to achieve compliance with ARB regulations or to play a role in ARB incentive programs. As part of our product and business planning we have been engaged with the ports, the surrounding communities, and the drayage truck owner/operators to better understand the needs of each of the stakeholders and to understand how our technologies might play a role in the air quality solution.

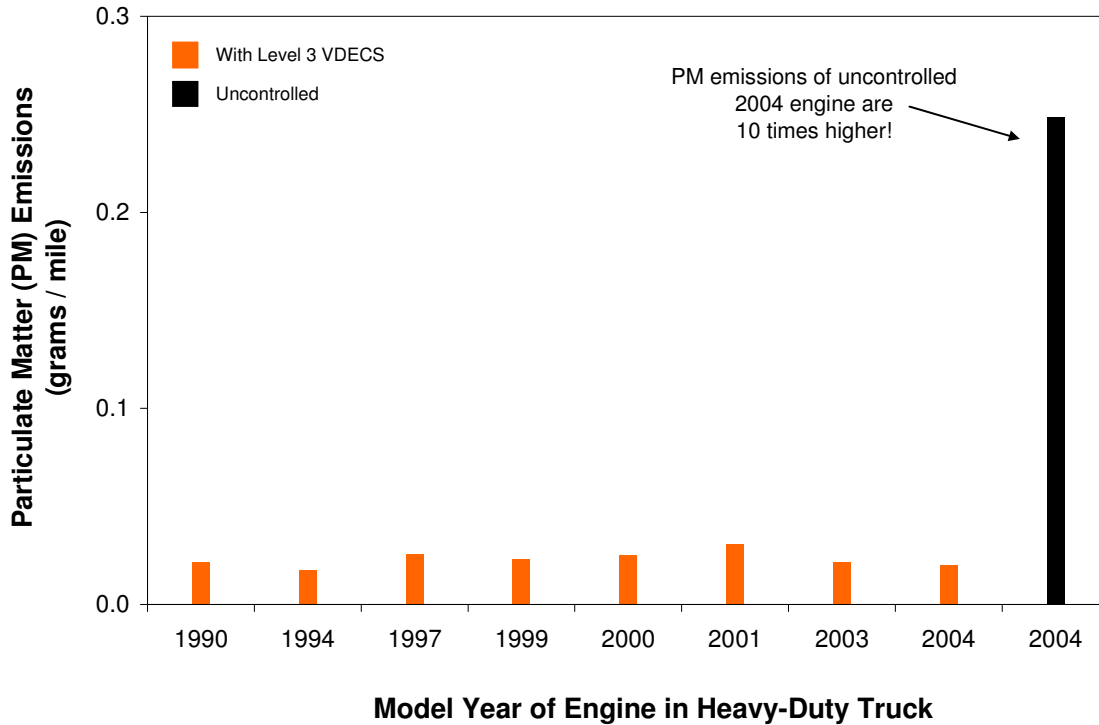
We also work very closely with ARB staff on two fronts. First, by interacting and sharing data during the rigorous product verification process, and secondly by providing input on rule and program development based on our perspective as a supplier of technology solutions.

Based on our experience with diesel retrofit technology and our interaction with these key stakeholders we would like to offer two specific improvements to the rule.

First, as it stands the current rule language will allow 2004-2006 trucks to operate uncontrolled in the ports until 2014. Left uncontrolled these engines will emit at least ten times the particulate emissions of either a 2007 certified engine, or any pre-2007 engine equipped with a Level 3 VDECS. Today, VDECS are available for these trucks, others are in the verification process, and more will come if this technology forcing standard is put in place.

Figure 1 illustrates the impact of allowing 2004-2006 engines to remain uncontrolled. The figure shows particulate matter emissions for an uncontrolled 2004 truck and eight Level 3 VDECS-equipped trucks on

a transient test cycle (the UDDS). There are two important conclusions to draw from the figure: 1) Trucks equipped with Level 3 VDECS have very low PM emission levels, regardless of model year – a 1990 is just as clean as a 2004. 2) An uncontrolled 2004 truck emits ten times more PM than the trucks with VDECS. Since 2005 and 2006 trucks have identical PM certification levels and EMFAC emission factors, we expect their emissions to be quite similar to the 2004 truck.



**Figure 1: Chassis dynamometer test results for eight heavy-duty trucks equipped with Level 3 VDECS and one truck without emission controls. Emissions were measured on the UDDS per CFR procedures.**

Second, we ask you to amend the proposed regulation to allow 1988 through 1993 model year trucks to continue to operate during Phase 1 if a Level 3 VDECS is installed. We understand the desire to scrap this segment of the truck population and replace them with trucks having engines that meet the 2007 emission standard. However, the success of this approach is strongly dependent on outside funding as these newer trucks are estimated to cost between \$100,000 and \$150,000. A much lower cost alternative would be to require these engines to be retrofitted with a Level 3 VDECS that would cost between \$10,000 and \$20,000. Currently, two VDECS from two different companies are available for these trucks, others are in the verification process, and more will come if this technology forcing standard is put in place.

One suggestion would be to create a preference to scrap the 1988-1993 trucks conditioned on the availability to successfully fund the truck replacement. If funding is not sufficient, a retrofit requirement would be positioned as a fallback. This approach would reduce the risk of placing excessive financial burden on the State and/or the most economically vulnerable truck drivers while still achieving essentially equivalent reductions of particulate emissions.

We propose the following improvements to §2027 (d) of the proposed regulation:

**Phase 1:** By December 31, 2009, all drayage trucks must be equipped with a:

- (A) ~~1994~~1988-2003 model year engine certified to California or federal emission standard and a level 3 VDECS for PM emissions:  
or,
- (B) 2004 or new model year engine certified to California or federal emission standards and a level 3 VDECS for PM emissions;  
or,
- (C) meets or exceed 2007 model year California of federal emission standards.

Our recommended changes are squarely in line with ARB's Diesel Risk Reduction Plan goal of achieving a 75% PM reduction by 2010. The ARB has the opportunity to make the most out of currently available and verified emission reduction technologies while also spurring technology development that will help the State of California achieve this important health-protecting goal.

Claire pledges to continue do our part by providing the well designed Level 3 VDECS that when deployed will ultimately help ARB achieve their objectives for this proposed regulation. We ask that ARB "set the standard" and allow for technologies to meet this standard, whether they come in the form of new trucks or as retrofits. Allowing flexibility and competition in meeting these standards will result in the most cost effective solutions to our air quality issues.

Thank you for considering the comments and recommendations provided to you in this letter. Claire looks forward to working with the ARB and to continue to provide technologies that enable significantly cleaner air for California.

Sincerely,



Dr. Bradley L. Edgar  
Executive Vice President

Cc: Mr. Daniel Sperling, CARB Board Member  
Mr. Jerry Hill, CARB Board Member  
Ms. Dorene D'Adamo, CARB Board Member  
Ms. Barbara Riordan, CARB Board Member  
Ms. Lydia H. Kennard, CARB Board Member  
Ms. Sandra Berg, CARB Board Member  
Mr. Ron Roberts, CARB Board Member  
Ms. Judy Case, CARB Board Member  
Mr. Ronald O. Loveridge, CARB Board Member