

May 18, 2010

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Re: California State Nonroad Engine Pollution Control Standards; California Nonroad Compression Ignition Engines – In-Use Fleets; Request for Public Hearing; Docket ID No. EPA-HQ-OAR-2008-0691

Dear Mr. Dickinson:

The Associated General Contractors of America and its California chapters (collectively “AGC” or “the association”) are pleased to respond to the notice that the U.S. Environmental Protection Agency (“EPA”) published in the Federal Register on March 12, 2010, entitled: “California State Nonroad Engine Pollution Control Standards; California Nonroad Compression Ignition Engines – In-Use Fleets; Authorization Request; Notice of Opportunity for Public Hearing and Comment,” 75 Fed. Reg. 15880.

The Associated General Contractors of America is the leading trade association in the construction industry. It was founded in 1918 at the express request of President Woodrow Wilson, and today, it has more than 33,000 members in 95 state and local chapters throughout the United States. Among AGC’s members are 7,500 of the most professional general contractors in the construction industry, over 12,500 specialty contractors, and more than 13,000 suppliers and service providers to the construction industry. AGC’s two chapters in California account for more than 1,400 of these firms. Like their counterparts in other states, these firms are engaged in the construction of highways, bridges, tunnels, airport runways and terminals, buildings, factories, warehouses, shopping centers, and both water and wastewater treatment facilities.

AGC has already expressed its strong opposition to California’s request for federal authorization to enforce its In-Use Off-Road Diesel-Fueled Fleets Regulation (the “Rule”).<sup>1</sup>

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<sup>1</sup> See Enclosure A. If and to the extent that EPA has not already included any one or more of the letters that AGC submitted to EPA on October 20, October 22 or December 19 of 2008, or March 10 or August 10 of

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Without getting into the details of AGC's prior submissions to EPA, or recounting all of AGC's many reasons for opposing California's request, AGC would also note that they include the following:

- California's Rule is not yet ripe for federal review;
- California does not need the Rule to meet compelling or extraordinary circumstances; and
- California did not provide adequate lead time to permit the development of the necessary technology giving appropriate consideration to the cost of compliance with that time period.

## **I. RECENT DEVELOPMENTS**

Since January 27 of 2010, when AGC last wrote to EPA, several important developments have occurred. The Executive Officer of the California Air Resources Board ("CARB") held an evidentiary hearing on the Rule. EPA held an evidentiary hearing on California's request for federal authorization. AGC completed a landmark study of CARB's original emissions inventory. CARB acknowledged that its original emissions inventory was badly flawed. And CARB announced both a plan and a timetable for making significant changes to the Rule.

As AGC will later explain, each of these developments reinforces one or more of AGC's reasons for denying California's request. Indeed, the case against that request is now overwhelming.

### **A. Executive Officer Hearing on the Off-Road Rule.**

On January 11, 2010, AGC submitted its second petition for relief from the Rule to CARB.<sup>2</sup> That petition was for emergency relief from the March 1, 2010, deadline for compliance with the Rule's fleet average and other core requirements. AGC filed that petition without prejudice to its prior pending petition for more substantial and permanent relief from the Rule.<sup>3</sup> AGC had detailed the nature and scope of that relief in December of 2009.<sup>4</sup>

CARB responded to AGC's second petition on February 11, 2010. Without granting the emergency relief that AGC had requested, or expressly denying the petition, CARB announced (1) that it would stay enforcement of the Rule until EPA had granted CARB's

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2009, or January 11 or January 27 of 2010, in the record of these proceedings, AGC hereby incorporates these earlier letters into this letter, as if they were fully set forth herein, and AGC now submits them for the record.

<sup>2</sup> See EPA-HQ-OAR-2008-0691-0247.2 and -0247.3.

<sup>3</sup> See EPA-HQ-OAR-2008-0691-0232.1 and -0232.2. By mutual agreement between AGC and CARB, the petition for permanent relief is subject to a stay which either party may lift on fourteen (14) days notice.

<sup>4</sup> Letter from Michael Steel to Michael Terris, CARB, re Offroad Diesel Rule – Economic Impact on Emissions, dated December 7, 2009 (Enclosure B).

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request for federal authorization to enforce the Rule, and (2) that CARB's Executive Officer would hold an evidentiary hearing on the off-road rule, including the questions that the petition had raised, in Sacramento on March 11, 2010.<sup>5</sup>

The Executive Officer has now held that hearing. At its outset, he and his colleagues on the CARB staff outlined the purpose of the hearing and the questions that the staff hoped the hearing would answer. The Executive Officer also acknowledged that he "did not grant the AGC petition to adopt emergency amendments to the off-road regulation,"<sup>6</sup> but one of his colleagues announced that "we plan to return to the Board later this summer to propose appropriate changes to . . . the off-road regulation . . . ."<sup>7</sup>

AGC delivered a six-part presentation that included the following:

- an economic forecast for California's construction industry;
- a review of AGC's efforts to engage CARB in a joint effort to clarify the NOx and PM emissions from the regulated fleets;
- an expert presentation on CARB's OFFROAD model and its flaws;
- one construction equipment consultant's perspective on the Rule and what it requires of contractors; and
- two first-hand accounts of how the Rule was affecting individual contractors.

Following are highlights of the economic forecast and the expert presentation that AGC delivered at the outset of the hearing and a summary of the testimony that followed the forecast and presentation.

**1. California's Construction Industry Will Require More than Five Years to Recover.**

Dr. Lynn Reaser served as the Chief Economist for the Bank of America's Investment Strategies Group from 1999 to 2009. Educated at UCLA, Dr. Reaser now serves as the Chief Economist at the Fermanian Business and Economic Institute and as President of the National Association for Business Economics.

At the March hearing, she testified that the last four years had witnessed "an absolutely devastating downturn in the [California] construction industry,"<sup>8</sup> including "a huge drop of over 360,000 jobs."<sup>9</sup> She added that non-residential construction "always lags the

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<sup>5</sup> Enclosure C is the transcript of the hearing that CARB's Executive Officer held on March 11, 2010 (hereinafter "March Transcript").

<sup>6</sup> March Transcript, at 2.

<sup>7</sup> Id., at 18.

<sup>8</sup> Id., at 27.

<sup>9</sup> Id., at 29.

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recovery,”<sup>10</sup> that California would be “unlikely [to] see any improvement in new building until probably 2012,”<sup>11</sup> that California’s construction activity in 2015 would still be “just two-thirds” of its activity in the peak years (between 2002 and 2006).<sup>12</sup>

She added that, “in the next five years, we would expect to see a really constrained rise also in gross state product that’s related to construction spending.”<sup>13</sup> Under the circumstances, and with due regard for CARB’s environmental objectives, her “optimal solution” was “to defer the regulatory rules until 2015.”<sup>14</sup>

## **2. CARB Has Ignored Both Public and Private Reports of Serious Flaws in Its OFFROAD Model.**

Mr. James M. Lyons is a senior member of the research team at Sierra Research, a well known and well regarded consultancy headquartered in Sacramento.

On March 11, Mr. Lyons reported that AGC had already completed one update of CARB’s original emissions inventory. He added that the limited purpose of that exercise was to account for the new data CARB had collected between March and September of 2009, as several new reporting requirements took effect. He explained that AGC had simply run the new data through the OFFROAD computer model that CARB had used to develop its original emissions inventory.<sup>15</sup>

He then reported that AGC was still working on a second update of the emissions inventory. He explained that the somewhat broader purpose of that exercise was to account for the additional data that CARB had collected between September of 2009 and February of 2010, to account for the equipment reported to be “low use,” and to determine what kind of adjustment would be necessary to reconcile the model’s results with actual records on diesel fuel consumption.<sup>16</sup>

Focusing on the third of these three points, he further explained that the model estimates both emissions and diesel fuel consumption, and that one can compare the model’s estimates of the latter with the actual records for a given year, and thereby assess the model’s accuracy.<sup>17</sup> Robert Sawyer, a member of the faculty of the University of California at Berkeley, and a former Chair of CARB, had pioneered this approach in conjunction with Andrew Kean

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<sup>10</sup> Id., at 30.

<sup>11</sup> Id., at 31.

<sup>12</sup> Id., at 32.

<sup>13</sup> Id., at 33.

<sup>14</sup> Id., at 36. Enclosure D is the PowerPoint presentation that Dr. Reaser delivered.

<sup>15</sup> March Transcript, at 45.

<sup>16</sup> Id., at 45-46.

<sup>17</sup> Id., at 46.

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(currently an assistant professor at Cal Poly), and Robert Harley (another Professor at the University of California at Berkeley).<sup>18</sup>

The CARB staff had been well-aware of their work for quite some time. Professors Sawyer, Kean and Harley had published their initial findings a decade earlier. Professor Harley had written a report specifically for CARB, and specifically calling on CARB to take the steps necessary to validate its model, back in 2004.<sup>19</sup> Professor Harley had published a third paper, including actual estimates of the size of the flaw in the OFFROAD model, in conjunction with Dr. Dev Millstein of Lawrence Berkeley National Laboratory, in September of 2009.<sup>20</sup>

In his 2004 Report, Professor Harley had specifically stated that “[o]ff-road diesel engine activity and emissions in California should be reassessed.”<sup>21</sup> Notably, this report, which was commissioned by CARB and delivered to the staff before the Rule was adopted, does not appear in the administrative record for the Rule.<sup>22</sup>

In the article published in September of 2009, Professors Harley and Millstein had found that “California’s OFFROAD model estimates are 4.5 and 3.1 times greater, for NOx and PM, respectively, than the fuel-based estimates developed here.”<sup>23</sup> Although this report was available to the staff before its briefing of the Board on December 9, 2009, the staff did not disclose the findings to the Board until April 22, 2010.

Mr. Lyons outlined the nature and purpose of this research and the reasons why it is so important. If the model is overestimating emissions from the regulated fleets, then it is also overestimating the emission benefits of the Rule, and CARB has to revisit the cost-effectiveness of the Rule. In addition, in that case, CARB must question whether the Rule

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<sup>18</sup> Id., at 47-48. Kean, A.J., Sawyer, R.F., and Harley, R.A., “A Fuel-Based Assessment of Off-Road Diesel Engine Emissions,” *J. Air & Waste Manage. Assoc.* 50:1929-1939, 2000. See Enclosure E.

<sup>19</sup> Harley, R.A., et al., “Decadal Trends in Air Pollutant Emissions from Motor Vehicles in Central California,” prepared for San Joaquin Valleywide Air Pollution Study Agency and California Air Resources Board, Final Report, Contract 00-14CCOS, May 2004 (hereinafter “2004 Report”). See Enclosure F.

<sup>20</sup> Millstein, D.E., and Harley, R.A., “Revised estimates of construction activity and emissions: Effects on ozone and elemental carbon concentrations in southern California,” *Atmospheric Environment* 43:6328-6335, 2009 (“2009 Millstein & Harley Study”). See Enclosure G.

<sup>21</sup> 2004 Report, at 26.

<sup>22</sup> Note that Professor Harley is in fact highly regarded by CARB, and continues to provide major research assistance to the agency. In March 2009, he completed research for CARB on “On-Road Measurement of Light-Duty Gasoline and Heavy-Duty Diesel Vehicle Emissions” (Contract 05-309). See <http://www.arb.ca.gov/research/apr/past/05-309.pdf>. Professor Harley also presented a CARB Chair’s Air Pollution Seminar on the same topic on May 8, 2009. See <http://www.arb.ca.gov/research/seminars/harley3/harley3.htm>.

<sup>23</sup> 2009 Millstein & Harley Study, Abstract.

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has any potential to improve California's air quality.<sup>24</sup> In conclusion, Mr. Lyons announced that AGC would soon complete its own analysis of the OFFROAD model.<sup>25</sup>

**3. Construction Contractors and Other Stakeholders Repeatedly Testified that the Necessary Technology Had Yet to Develop.**

A total of 12 construction contractors participated in the hearing. Their consistent message was that the Rule had compelled them to sell equipment and downsize their companies. They testified that they could not retrofit, repower or replace their equipment to the extent necessary come into compliance. As the first deadline for compliance with the Rule came and went, the financial and technical barriers continued to preclude compliance by any means other than shrinking of fleets.

These contractors and their testimony included the following:

- Mike Shaw of Perry & Shaw:

"In 2006, we had a fleet that included 110 pieces of this equipment, 56,000 horsepower. Today, we have about 45 pieces of this equipment, 28,000 horsepower. We reduced the fleet in anticipation of compliance with this regulation. In normal circumstances, we probably would have just parked it and waited for businesses to come back."<sup>26</sup>

\* \* \*

"We've received credits sufficient to get us into 2014, which sounds like a really good thing. And I'm happy about that aspect of it.

"The problem is what I've had to do to get those credits. We've had -- of course, reduced activity credit, that works for us somewhat. But the big deal is we've had to shrink our fleet by 50 percent. We've taken 60 seats -- 60 operating engineers seats and thrown them away."<sup>27</sup>

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"I'm going to have to just continue to shrink my fleet and put operating engineers out of work to comply with this thing."<sup>28</sup>

- Tom Foss of Griffith Company:

"When I met yesterday with the equipment manufacturer, I told him I had no plans to buy any new equipment this year because of the uncertainty in the economy and the

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<sup>24</sup> March Transcript, at 49-50.

<sup>25</sup> Id., at 46, 50.

<sup>26</sup> Id., at 52.

<sup>27</sup> Id., at 53.

<sup>28</sup> Id., at 55.

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uncertainty in the construction industry. Griffith Company is conserving our cash right now. So we're not doing any capital investment. We're really trying to sit tight.

\* \* \*

"...Over the next two years, Griffith Company is budgeted to spend about a million-and-a-half dollars in filters, repowers, to try to get into compliance."<sup>29</sup>

"I'm asking for a five-year delay."<sup>30</sup>

\* \* \*

"And the reason why I would ask for five is that five years allow the technology to catch up."<sup>31</sup>

- Doug Chapin of Don Chapin Company:

"Since 2006, we've sold or disposed of 35 pieces of Tier 0 equipment. We purchased 24 new machines, none of which by the way will be in compliance with your regulation in just a few years without further modification.

"We spent millions of dollars in our efforts to comply with this regulation. And we still can't make it."<sup>32</sup>

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"In 2006, I employed 260 people just in our construction business. Today, that number is 185."<sup>33</sup>

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"Except for low use and giving my fleet away, I can't make this requirement. We can't do it this year; we won't do it next year."<sup>34</sup>

\* \* \*

"[W]e need at least two to five years if not more[.]"<sup>35</sup>

- Rod Michaelson of Bay Cities Paving and Grading:

"We have 104 pieces of equipment, about 14,500 horsepower."<sup>36</sup>

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<sup>29</sup> Id., at 59.  
<sup>30</sup> Id. at 60.  
<sup>31</sup> Id.  
<sup>32</sup> Id., at 87.  
<sup>33</sup> Id.  
<sup>34</sup> Id., at 89.  
<sup>35</sup> Id., at 90.  
<sup>36</sup> Id., at 90-91.

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“Out of the 104 pieces, I have 24 pieces that are high frequency vibration paving equipment. They can’t handle DPFs. I have 47 pieces that I keep less than six years. I’m not going to put a DPF on something I’m going to keep six years.”<sup>37</sup>

\* \* \*

“What you’re doing is retrofitting really expensive cassette players.”<sup>38</sup>

- Keith Wood of Shimmick Construction Company:

“We have 100 pieces of equipment in the off-road rule. We’re also a member of South Coast’s showcase program. We tried very hard to get in there and become a big part of this program.

“Out of our 100 pieces of equipment, we could only come up with four pieces that we could retrofit through their program that was either economically viable to us or to them or that would even work on.”<sup>39</sup>

- Dave Valdez of Penhall Company:

“We are going to make our off-highway through 2013 we think through the DOORS program. That’s due to reduction in fleet. We’re able to take a 17,000 horsepower credit which eliminated 20 operating engineers’ positions in one division.”<sup>40</sup>

- Skip Brown of Delta Construction Company:

“You heard about how companies are going to survive this. If they do survive this, they’re going to do it by attrition. We’re going to cancel seats and get rid of equipment.”<sup>41</sup>

- Dermot Fallon of Foundation Constructors:

“[W]e have spent approximately \$5 million . . . .”<sup>42</sup>

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“... To meet the 2011 requirements, we are looking at spending another 500 [thousand] to a million dollars. For us to comply with the 2011, 2013 requirements could put us out of business.”<sup>43</sup>

- John Juette of J&M Land Restoration:

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<sup>37</sup> Id., at 91.  
<sup>38</sup> Id., at 93.  
<sup>39</sup> Id., at 93-94.  
<sup>40</sup> Id., at 105.  
<sup>41</sup> Id., at 109-110.  
<sup>42</sup> Id., at 114.  
<sup>43</sup> Id.



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“We will not make your year 2011 compliance. There’s no way. We don’t have the income to buy the filters, to retrofit new engines, or put new engines in the machines is just not practical at this point in time.”<sup>44</sup>

- Tyler Lebon of Fremont Paving:

“One thing I’d like to point out to you guys is as construction companies, our assets are made up primarily of our equipment. We don’t have licensing agreements. We don’t have patents. We don’t [have] trademarks. It’s almost all equipment. This regulation has taken away over 90 percent of that.

“Now, the problem isn’t that the credit industry has tightened up; it’s that we have no more assets left on our books for the banks to look at and say okay. We have nothing. So not only can we not afford to get retrofits done, . . . a majority of the time the retrofits cost more than the tractors is worth.”<sup>45</sup>

Three equipment rental companies delivered strikingly similarly testimony. These companies and their comments included the following:

- Sam Leeper of B&B Equipment Rental:

“B&B . . . used to be a family-owned company. We were forced because of the economy and the regulations to sell the company out. We cannot survive the economy and CARB and keep the company and its employees in business without help.”<sup>46</sup>

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“... I know for a fact there has been a lot of contractors that have went out of business because they can’t make the requirements or they’re not going to try to make the requirements, and a lot of contractors have moved out of state to do business other places.”<sup>47</sup>

- Gordon Downs of Downs Equipment Rentals:

“We have not installed a single diesel particulate filter. As we have reported in the past, we are a rental company. A renter will not rent a machine if there is a choice that has an active diesel particulate filter installed. The renter will tell you that he will not rent a machine, that: Number one, increases his chance of damage to an expensive machine; number two, that may cause unnecessary downtime during a work shift; number three, creates the possibility of added labor cost to regenerate the DPF after the work shift is over.

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<sup>44</sup> Id., at 119.

<sup>45</sup> Id., at 164-165.

<sup>46</sup> Id., at 116.

<sup>47</sup> Id., at 118.

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“So you can see that just the sound [of] the word DPF causes chills to go up and down our spines because we can’t rent them at this point. We can’t rent a machine with an active diesel particulate filter installed.

“The only diesel particulate filter suitable for our company would be 100 percent passive. To date, we are not convinced that such a thing exists for our type of equipment and for our use.

“The added problem is that diesel particulate filters cost \$25,000 to \$50,000 a machine, not the \$6- to \$7,000 per machine we were originally told at a CARB meeting. Our company does not have money to spend on DPF or replacement. If our company were required at this time to spend money for compliance, our response would be to sell equipment, reduce the workforce, and deal with the stress and anxiety of what the economy and CARB is going to do to us next . . . .”<sup>48</sup>

Individual operating engineers also attested to the ongoing problems involved in retrofitting off-road equipment, for both financial and other reasons. The gentlemen who testified and their statements included the following:

- Steve Lewis:

“I’ve actually worked on some of the equipment with the retrofits done to them. And there are some safety issues. You know, the vision, it just takes away a lot of vision for an operator. There are some blind spots due to the heavy bulky equipment that’s been installed on some of this equipment.”<sup>49</sup>

- Dave Harrison:

“We’re forcing our employers to choose between a filter and an employee. Can’t afford both.”<sup>50</sup>

\* \* \*

“... These filters create a huge safety hazard. There’s fire burn and obstruction of vision. They’re extremely expensive. And they may have to be installed as many as three times in some cases working through some of the exemption and the different methodologies.”<sup>51</sup>

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“... We heard the filter manufacturers testify today that they’ve been working for ten and sometimes 20 years. We need to give it a couple more years. Do more research and

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<sup>48</sup> Id., at 139-140.

<sup>49</sup> Id., at 100.

<sup>50</sup> Id., at 103.

<sup>51</sup> Id.

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development, because one-size-fits-all does not work. And we've learned that. If it did work, we wouldn't be where we're at with the safety issues. Design a filter that's safe."<sup>52</sup>

A final exchange between Executive Officer James Goldstene and witness Gordon Downs summarized the most obvious and certain lesson of the day.

- Gordon Downs:

"Throughout the day, it seems to me that I what heard was that in most cases our only options are to, as equipment owners, business operators, in order to comply with this regulation, we are going to have to shrink in size, most of us -- there are a few rare exceptions out there . . . ." <sup>53</sup>

- Executive Officer James Goldstene:

"That is what we heard, exactly."<sup>54</sup>

### **B. EPA Hearing on California Waiver Request.**

EPA held a second hearing on CARB's request for federal approval to enforce the Rule on April 14, 2010 in Washington, D.C.<sup>55</sup> A total of nine individuals testified, including two members of the CARB staff.

Mr. Jon Cloud testified on behalf of AGC. Mr. Guy Prescott testified on behalf of Local 3 of the International Union of Operating Engineers but also in strong support of AGC's position. Mr. Cloud is the Treasurer of J.C. Cloud Inc., a minority-owned company in El Cajon, California. Mr. Prescott is the Executive Director of the Employee Assistance Program for Local 3.

At the outset, Mr. Cloud explained that his company is a small one that he runs in conjunction with his father and two brothers and that it specializes in supplying recycled concrete and asphalt to the construction industry. He then summarized the several reasons why AGC continued to oppose CARB's request for federal approval to enforce the Rule. Specifically, he noted that the Rule continued to change, and remained a "moving target." He also questioned whether CARB had any demonstrable need for the Rule, explaining that AGC had found serious flaws in CARB's original emissions inventory and further research appeared likely to confirm even more serious flaws. Citing new data that CARB had collected in 2009, and using CARB's own OFFROAD model, AGC had demonstrated that

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<sup>52</sup> Id., at 104

<sup>53</sup> Id., at 190

<sup>54</sup> Id.

<sup>55</sup> Transcript, CARB's Request for EPA Authorization of Its Off-Road Compression Ignition In-Use Fleets Regulation, April 14, 2010 ("April 2010 Waiver Transcript").

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the regulated fleets were already exceeding CARB's emission goals, and would continue to do so for at least several years. In an effort to confirm public reports of serious problems with the model itself, AGC was in the process of comparing the models results with actual data on diesel fuel consumption.<sup>56</sup>

Mr. Cloud then turned his attention to the cost of the Rule, directly contradicting CARB's claim that California's construction contractors can absorb the cost. He pointed out that California's construction industry remains at the bottom of the worst economic depression in the memory of anyone still in the industry. He then emphasized the lesson everyone had learned on March 11, when the CARB staff had held its lengthy hearing: in the lead time that CARB had provided, the technology necessary to comply with the Rule at anything approaching an affordable cost had failed to develop. Construction contractors and other fleet owners had found it too expensive, hazardous or otherwise infeasible to retrofit, repower or replace their equipment to the extent necessary to satisfy the Rule. In fact, they found themselves with no alternative to selling their equipment and downsizing their companies.<sup>57</sup>

Mr. Prescott explained that he was a safety professional with over 25 years of experience and emphasized that he was testifying on behalf of the 37,000 members of Local 3.<sup>58</sup> He then turned his attention to the verified diesel emission control system ("VDECS") that CARB had expected to play such a large role in bringing construction contractors and other fleet owners into compliance with the Rule – and more precisely, to CARB's assumption that VDECS would be feasible to install in great numbers. In sum, he testified that this assumption was false.<sup>59</sup>

He pointed out that over 500 construction workers had lost their lives in "struck-by" accidents in each and every year since 1992, and that some obstruction of the equipment operator's line of sight was almost always a contributing if not a primary factor in these accidents. He then explained that CARB had wrongly assumed that fleet owners could safely retrofit their equipment even if doing so would impair visibility from the operator's seat.<sup>60</sup>

He also outlined the union's many efforts to bring the dangers of retrofitting literally thousands of pieces of off-road equipment to CARB's attention. He acknowledged that the final rule does have an exemption for equipment that would be unsafe to retrofit, but noted that this exemption makes no reference to visibility and leaves the final decision on what is and is not safe up to CARB. He concluded that this exemption falls far short of what is

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<sup>56</sup> April 2010 Waiver Transcript, at 67, 60-63.

<sup>57</sup> Id., at 63-72.

<sup>58</sup> Id., at 36-37.

<sup>59</sup> Id., at 40-41.

<sup>60</sup> Id., at 37-38.

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necessary to protect construction workers for at least three reasons: the exemption only applies to individual pieces of equipment (and does not lift the regulatory burden on the fleets to which it belongs), CARB has neither the expertise nor the legal authority to determine what is safe, and CARB remains biased in favor of retrofits.<sup>61</sup>

Finally, Mr. Prescott testified that CARB and California's Occupational Safety and Health Standards Board ("OSHSB") had yet to resolve the serious questions that the AGC of California and Local 3 had raised when they jointly petitioned OSHSB to revise California's safety standards to address the hazards inherent in retrofitting existing equipment. He reported that the OSHSB had granted that petition in November of 2008, and that the two agencies were still struggling to reach some kind of agreement on the best way to protect construction workers from being hit, burned or otherwise injured by the unsafe practices that the Rule contemplates.<sup>62</sup>

**C. Publication of Study Indicating CARB's OFFROAD Model Overstated Construction Emissions by a Factor of 3 or More.**

On April 20, 2010, Mr. Lyons completed and released his update of the emissions inventory that AGC had conducted in 2009, including a technical report on both his data and his methodology.<sup>63</sup> As noted earlier, the purpose of this exercise was to account for the additional data that CARB had collected between September of 2009 and February of 2010, to account for the equipment reported to be "low use," and to determine what kind of adjustment would be necessary to reconcile the model's results with actual records on diesel fuel consumption. After isolating and setting aside flaws in the data that CARB had used to develop its original emissions inventory, he found that the OFFROAD2007 model was consistently overestimating emissions by a factor of 3.5.<sup>64</sup> Taking everything into account, he found that CARB had overestimated the emissions from the regulated fleets in 2009 by a factor of 6.<sup>65</sup>

Mr. Lyons based his results primarily on the new data that CARB had assembled in 2009, including new data on the population of off-road diesel equipment in California. As it turned out, there were 157,000 pieces of this equipment, and not the 192,000 that the staff had

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<sup>61</sup> Id., at 39-42.

<sup>62</sup> Id., at 42-44.

<sup>63</sup> "Emissions from Diesel-Fueled Non-Road Equipment in California," J. M. Lyons, et al., April 19, 2010 ("2010 Lyons Report," Enclosure H). "Breathing Room: California Has Room to Preserve and Protect Construction Jobs and Still Exceed Goals for Reducing Emissions from Off-Road Fleets," AGC PowerPoint, April 21, 2010. See Enclosure I.

<sup>64</sup> 2010 Lyons Report, p. 9. Emissions parallel the consumption of diesel fuel, and in 2009, off-road equipment burned only 164 million gallons of this fuel. If the CARB's original estimates were correct, that number would have reached 581 million gallons.

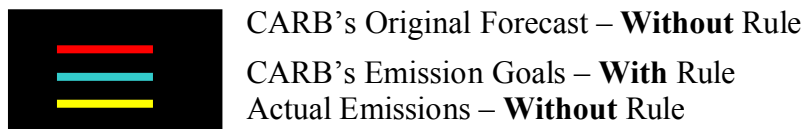
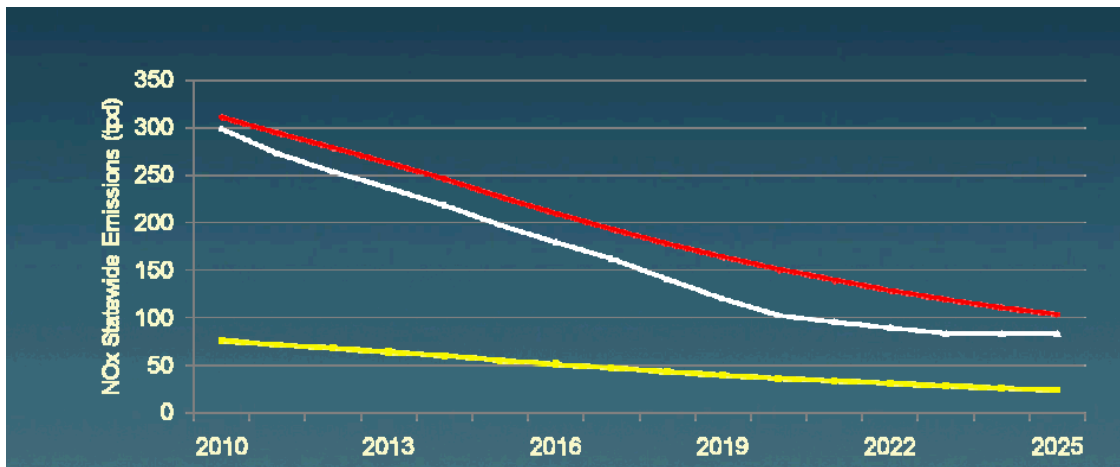
<sup>65</sup> Id., at 11.

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assumed, and 7.5 percent of it was low use.<sup>66</sup> Other data came from the State Board of Equalization, the U.S. Department of Energy, and records detailing the number of hours that equipment operators had actually worked.

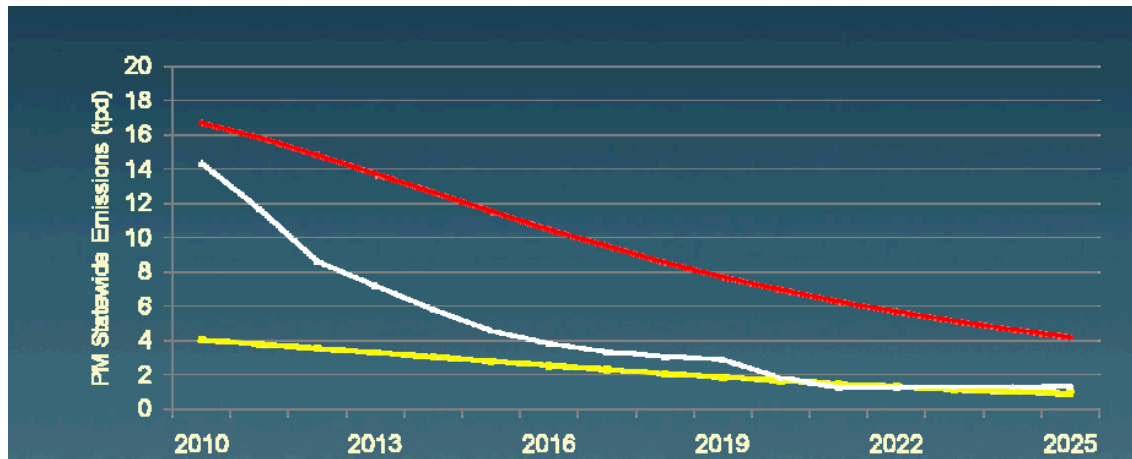
The bottom line is that – without the Rule – future emissions of nitrogen oxides will be 64 to 74 percent below the state's emissions goals through 2025. Future emissions of particulate matter will be more than 30 percent below the state's emissions goals through 2019. Following are two charts that display these results:

**NO<sub>x</sub> Emissions**



<sup>66</sup> Id., at 5- 6.

**PM Emissions**



In sum, the emissions inventory that served as the starting point for the Rule was badly flawed, and all of the findings and conclusions that have followed from that inventory are unsupported. California will not need the Rule to meet its emission goals for NOx for the foreseeable future, and California will not need the rule meet its emission goals PM through at least 2020.

**D. CARB Board Meeting of April 22, 2010.**

At the landmark meeting that CARB held on April 22, 2010, the CARB staff finally admitted that it had overestimated emissions from the regulated fleets. The staff, however, maintained that its original estimates were off by a factor of between 1.4 and 2. The staff also criticized Mr. Lyons for not reflecting the “true” population of the off-road equipment subject to the Rule. Indeed, it asserted that the “true” population should include a mysterious estimate of unreported equipment. Going well beyond the new data that it had collected in 2009, and the fuel consumption data that Professors Harley and others had called to its attention, the staff also outlined several other changes that it had made to the model, including its load, growth and emissions factors, before calculating what was supposed to be the size of its original error.<sup>67</sup>

<sup>67</sup> See “Update Regarding the Off-Road Regulation and the In-Use On-Road Diesel Vehicle Regulation,” (Staff Presentation) April 22, 2010 attached as Enclosure J.

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The staff also sought to make several fundamental changes in its approach to the Rule. Instead of the statewide data on NOx and PM emissions, the staff proposed to focus on the South Coast Air Basin and the data limited to that area. The staff also proposed to combine construction and other truck emissions with the off-road emissions for that area.

AGC has doubts about the results that the staff announced and serious objections to the new approach that the staff proposed to take.<sup>68</sup> It is, however, enough to add that the meeting ended with the members of the Board and the staff in complete agreement that the Rule requires further revision. Indeed, they reached a consensus on “10 Guiding Principles for Amendments,” and the staff went into several “Change Concepts” it is already considering, including “[s]ome delay in the first compliance date,” and “[m]ore flexibility to use turnover, repowering for compliance in lieu of retrofiting.” The staff also proposed and the Board concurred in a “Proposed Timeline for Amendments,” including dates for a series of workshops and for developing specific amendments for the Board to consider.<sup>69</sup> The Board also directed the staff to defer enforcement of the Rule until the amendment process has run its course and construction contractors and other fleet owners have had adequate time to digest the amendments and come into compliance.<sup>70</sup>

## II. THE RULE IS NOT RIPE FOR WAIVER.

The Rule is not yet ripe for federal review. As the immediately preceding section relates, the Board has already directed its staff to develop potentially far-reaching amendments to the Rule, and the Board has committed itself to adopting at least some of these amendments. The Board will not, however, take any further action until at least September, and the Board will require several more months, extending well into 2011, to complete the amendment process. The Board has also directed its staff not to enforce the Rule as currently drafted, and to provide sufficient lead time – following the amendment of the Rule – for fleet owners to come into compliance. It would be imprudent for EPA to act on the California’s request for federal authorization until sometime in 2011 or later, when the Rule is in truly final form, and CARB has finally developed a record that that can support it.

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<sup>68</sup> Unfortunately, AGC is not yet in a position to make a full and complete statement about the results that the staff announced. Unlike Mr. Lyons, the staff did not provide a technical report or otherwise reveal the details needed to assess its methodology. On April 30, 2010, AGC made a California Public Records Act request for all supporting documentation, but CARB has yet to provide the requested information. As for the new approach that the staff proposes to take, the staff did not even attempt to explain how the administrative record or any of the related proceedings would justify such changes.

<sup>69</sup> April 22, 2010 Staff Presentation, at 4, 21, 29, 30.

<sup>70</sup> The transcript of the April 22 Air Resources Board meeting has just been made available. Transcript, Meeting, State of California Air Resources Board, April 22, 2010. See Enclosure K.



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### III. CALIFORNIA'S HAS NOT PROVIDED THE EVIDENCE NECESSARY TO SUPPORT ITS REQUEST.

Before the Administrator grants a California request for federal authorization to enforce emissions standards, the Administrator has to find that California has an adequate factual foundation for those standards, and that granting federal authorization would be neither arbitrary nor capricious. EPA must engage in a thorough, probing in-depth review, considering whether CARB examined all relevant factors in its determination,<sup>71</sup> whether CARB made any clear errors of judgment, whether the determination was reasonable, whether there is a rational connection between the facts found and the choice made<sup>72</sup> and whether there is substantial evidence to support the determination.<sup>73</sup>

AGC believes that CARB: (1) failed to consider all relevant factors in its determination; (2) made many clear errors of judgment; (3) made determinations that were not reasonable; (4) lacked a rational connection between the facts found and the choice made; and (5) lacked substantial evidence to support the determination. EPA will find many grounds for these objections in the Attachment to this letter and AGC's prior submissions to the agency.

CARB's recent admission that its original emissions inventory was simply wrong reveals a "clear error of judgment" that permeated the entire rulemaking process. With these new facts in mind, EPA will find it impossible to conclude that there was a "a rational connection between the facts found and the choice made." It is also clear that, in light of this major error, there is not "substantial evidence to support the determination."

### IV. CARB DID NOT PROVIDE SUFFICIENT LEAD TIME FOR THE NECESSARY TECHNOLOGY TO DEVELOP, GIVING APPROPRIATE CONSIDERATION TO COST.

A California rule is consistent with Section 202(a) of the Clean Air Act only if it provides sufficient lead time to permit the development of the technology necessary to meet the rule's requirements in the time provided for compliance, giving appropriate consideration to the cost of compliance. And as CARB itself has noted, "[t]he 'technological feasibility' component of Section 202(a) obligates California to allow manufacturers to develop and apply the necessary lead time." *Citing American Motors Corp. v. Plum*, 603 F.2d 978, 981 (D.C. Cir. 1079) (Emphasis added).

In conjunction with the affidavits that AGC has already submitted for the record of these proceedings, the testimony delivered to CARB's Executive Officer on March 11 and directly to EPA on April 14 makes it abundantly clear that CARB cannot satisfy Section 202(a). The

<sup>71</sup> *Pension Benefit Guaranty Corp. v. LTV Corp.*, 496 U.S. 633 (1990).

<sup>72</sup> *Ethyl Corp. v. EPA*, 541 F.2d 1 (D.C. Cir. 1976).

<sup>73</sup> *Ass'n. of Data Processing Svc. Orgs. v. Fed'l Reserve Sys.*, 745 F.3d 677 (D.C. Cir. 1984).

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deadline for compliance with the Rule's fleet average and other core requirements came and went on March 1, and as that deadline passed, it remained infeasible for construction contractors and other fleet owners to retrofit, repower or replace their equipment to the extent necessary to come into compliance. The only option for the vast majority of fleet owners was to sell equipment and downsize their firms.

At the same time, the safety of CARB's strategy remained a matter of intense dispute between two agencies of California's state government. And CARB itself has yet to launch any inquiry into either the technical feasibility or the safety of installing VDECS on existing equipment. Indeed, CARB continued to argue that it had no legal obligation to undertake any such inquiry.

Even more recent developments have seriously damaged the administrative record intended to support the Rule. CARB's admission that its original emissions inventory was seriously flawed has cast down on everything that flowed from that inventory. In the Attachment, EPA will find numerous examples of the statements woven through CARB's Initial and Final Statements of Reasons, all of which are now wrong as a result of CARB's own admission that its model and fleet size estimates were fundamentally incorrect. The overwhelming weight of the evidence now before EPA is against California's request for federal authorization.

**A. The Rule's requirements are neither safe nor technically feasible.**

Technological feasibility must be demonstrable in the real world. It is not enough to show that VDECS reduce emissions under laboratory conditions, or that new or rebuilt engines have lower emissions than engines already in use. The Rule applies to equipment already in the field, and that is where the technology must be proven to be feasible.

As construction contractors and others testified on March 11, and EPA learned on April 14, there continue to be very serious problems with the safety and reliability of the VDECS that CARB has approved. CARB carefully avoids making any representation that these VDECS are safe to install. Actual experience with the limited number of units (less than 1000) that have actually made it into the field reveals that a number of them have very serious problems.<sup>74</sup>

Furthermore, the revisions to the Rule that the California Department of Labor, Division of Occupational Safety and Health ("Cal/OSHA")<sup>75</sup> required when in November of 2008 it granted a petition to amend its regulations still have not been made. These amendments were to ensure that VDECS must meet safety standards before being installed.

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<sup>74</sup> See Testimony and Presentation by Mr. Guy Prescott, April 2010 Waiver Transcript, at 36-53.

<sup>75</sup> Cal/OSHA has exclusive authority over the safety of California's workers. California Labor Code section 142.3(a).

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Cal/OSHA evaluated the actual installations of several VDECS and determined that they would “obstruct operator’s already restricted vision,” that they “would be a violation of Title 8 [safety] standards,” and further, that they “would increase the hazard of operating equipment.”<sup>76</sup> As Cal/OSHA emphasized in its evaluation, California safety standards require that “equipment and accessories be installed so as to avoid impairing the driver’s operational vision to the front or sides.”<sup>77</sup> Cal/OSHA therefore granted the petition to amend its regulations.<sup>78</sup>

These issues have yet to be resolved. CARB posted an Interim Retrofit Visibility Policy on its website in early 2009. That Interim Policy, however, only applies to the now-past deadline for compliance and leaves the issues subject to further discussion and consideration. This “Interim Policy” therefore has no continuing effect and the safety questions remain unresolved.

In the past, however, CARB has acknowledged that, due to these safety concerns, “most if not all of the retrofits required by the off-road regulation could become impossible to install.”<sup>79</sup> For the same reasons, CARB has also admitted that “major portions of the off-road regulation [are] no longer viable.”<sup>80</sup>

## **B. CARB Did Not Provide Adequate Lead Time.**

Section 202(a) contains a lead time requirement, requiring reasonable lead time “to permit the development of technology necessary to meet those requirements.”<sup>81</sup> In *AMC v. Blum*, the court stated “EPA has explained that it must deny a waiver for California if the state’s regulations provide ‘inadequate lead time to permit the development of the technology necessary to implement the new procedures, giving appropriate consideration to the cost of compliance within the time frame.’”<sup>82</sup>

CARB’s continuing efforts to amend the Rule to address the safety, availability and cost issues presented by the Rule makes it clear that the Rule is still “not ready for prime time”—

<sup>76</sup> Letter from Larry McCune, P.E., Principal Safety Engineer, California Division of Safety and Health Research and Standards Unit to Gary Rohman dated October 30, 2008.

<sup>77</sup> See 8 Cal. Code of Regulations section 1591(b); see also 8 Cal. Code of Regulations sections 3650(e), 3802, 3706, 1592(a) and (b). Note that federal OSHA regulations have similar provisions. See, e.g., 29 C.F.R. §§1926.601(b)(4); 1926.602(c)(1)(ii).

<sup>78</sup> CARB opposed these amendments and repeatedly expressed its skepticism that there are any real safety concerns; even though the agency’s own presentations offer as examples of successful installations photographs of VDECS that clearly violate the standards set forth above.

<sup>79</sup> Letter to Ms. Marley Hart, Executive Officer Cal/OSHA Standards Board, from Mr. Bob Cross, Chief, Mobile Source Division, CARB, dated November 18, 2008 (hereafter the “Cross Letter”). Attached hereto as Enclosure L.

<sup>80</sup> Cross Letter at p. 3.

<sup>81</sup> *Id.*, at 36983; See also *Am. Motors Corp. v. Blum*, 603 F.2d 978, 981 (D.C. Cir. 1979).

<sup>82</sup> 603 F.2d at 981 (quoting Waiver of Federal Preemption, 46 Fed. Reg. 26,371, 26,372 (1981)).

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that is, substantial further revisions may be needed to make the Rule workable. Under these circumstances, not only is the granting of a waiver premature, but lead time is effectively non-existent. While the first deadlines for completing retrofits or other fleet modifications already behind us, the Rule itself remains in a state of flux. This uncertainty about just what the Rule requires and how companies can comply makes planning impossible; thus, lead time has effectively been eliminated. The retrofits are simply not available, and the Rule did not provide adequate time for them to become available before implementation.

In light of these critical issues, EPA should defer or deny any decision on CARB's request for federal authorization. CARB acknowledges that the Rule suffers from serious defects, and these defects must be cured before contractors can begin to comply. "Lead time" must begin after CARB makes necessary changes, as construction contractors cannot develop their compliance strategies until CARB corrects the errors in its modeling, accounts for these errors in the administrative record supporting the Rule, amends the Rule as directed by the Board and addresses the safety issues raised by Cal/OSHA.

**V. CALIFORNIA DOES NEED THE RULE TO ADDRESS ITS COMPELLING AND EXTRAORDINARY CONDITIONS.**

The EPA must deny a waiver if California does not need the proposed standard to meet compelling and extraordinary conditions. Thus, CARB must demonstrate both (1) that there are compelling and extraordinary conditions and (2) that the Rule is needed to meet those conditions.

Now that AGC has demonstrated and CARB has even admitted that its original emissions inventory was fundamentally flawed, CARB has insufficient grounds for continuing to contend that the Rule is necessary. The emissions that CARB sought to reduce simply are not there. The Rule is much more likely to misallocate the scarce resources needed to improve California's air quality than to effect any improvement.

It is also important to note that, in its recent defense of the Rule, the CARB has focused on the localized conditions in the South Coast Air Basin, and provided nothing to support the need for any rule elsewhere in the State. This shift in CARB's rationale, and the agency's failure to offer any support for imposing the Rule on a statewide basis, makes it clear that California cannot meet the "need" standard that Congress embedded in the Clean Air Act.

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In the coming months, AGC will continue to work with CARB and simultaneously to assert that sound science must drive the decision-making process, that the grounds for the Rule must be transparent, and that CARB must implement the Rule in a manner that ensures operator safety. To AGC's regret, CARB is not yet there.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Steel". The signature is fluid and cursive, with a long horizontal stroke at the beginning.

Michael Jacob Steel

Encs.

cc: Michael Kennedy, Esq.  
General Counsel, AGC of America

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**Attachment**

*Following are examples of how key assumptions underlying CARB's analysis were simply wrong, and cannot now support a request for federal authorization.*

<b>Quotes from CARB ISOR, FSOR and TSD</b>	<b>FACTS</b>
<b>ISOR</b>	
Staff estimates that over its course, the regulation would require the installation of over 125,000 VDECS	Fewer than 1000 VDECS had been installed as of the last DOORS update in April 2010.
The California construction industry is expected to add about 8000 jobs per year from 2006 to 2014 (EDD, 2007).	From 2006 to 2010, California <i>lost</i> over 360,000 jobs.
<b>FSOR</b>	
Regulation will be affordable for the majority of fleets.	Most fleets have simply shut down equipment in order to comply; CARB has never analyzed the economic cost/impact of reducing fleet sizes.
We do not agree that most fleets will shrink to comply with the regulation.	CARB now admits that most fleets are achieving compliance by shrinking.
We also expect that job losses will not be significant	From 2006 to 2010, California <i>lost</i> over 325,000 jobs.
We expect that construction fleets will have the ability to bid higher on projects and pay for compliance without significantly affecting the financial situation of their fleet.	Bids for construction projects in California routinely come in significantly below engineering estimates. There is no way for contractors to pass on compliance costs, and this is why fleets are shrinking.
Construction is by its nature a local business that cannot be outsourced to other states or countries.	The Rule in fact favors larger out-of-state construction firms who have the ability to preferentially place their newer equipment in California. Construction work is, in effect, being outsourced to other states.

Quotes from CARB ISOR, FSOR and TSD	FACTS
Thus, if one fleet downsizes and reduces capacity, another is likely to grow or enter the state to take its place.	The downsizing of some California fleets has not resulted in growth in other fleets in California. Instead, the total equipment count in DOORS reflects true shrinkage in the number of units operating in the state.
Many fleets may have to change how they allocate capital resources, and they may need to borrow money to purchase retrofits and repowers, or to upgrade their vehicles.	Financing is not available for construction fleet upgrades due both to tightened credit and the weakened state of the industry. CARB now admits that in the period 2005 to 2009, equipment sales decreased by 80%. This situation makes the lead time for compliance inadequate.
<p>For an average medium or large fleet, the costs are expected to be between \$104 and \$117 per horsepower (/hp) for affected vehicles owned by the fleet.</p> <p>For an average small fleet, the costs will be approximately \$73/hp.</p>	Caltrans, the California state transportation agency, reports that their costs of compliance are about \$478 per horsepower. Similar costs are reported by numerous contractors in declarations submitted for this waiver proceeding, and these figures have not been disputed by CARB. The California Senate Subcommittee responsible for Caltrans' budget reported that "it is unfortunate that cost is significantly higher than the original CARB estimate."
By 2010 (the first compliance date in the regulation), passive filters would be available for at least 30 percent of the statewide off-road fleet.	Fewer than 1000 VDECS had been installed as of the last DOORS update in April 2010.
Competition is likely to lower the off-road VDECS prices.	The market for VDECS (fewer than 1000 units as of April 2010) is not large enough for any competitive pricing pressure to occur.

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Quotes from CARB ISOR, FSOR and TSD	FACTS
<p>The regulation is expected to require installation of over 100,000 VDECS, and it is likely that increased production volumes and improved economies of scale from retrofit manufacturers will bring down prices.</p>	<p>Fewer than 1000 VDECS had been installed as of the last DOORS update in April 2010.</p> <p>The market for VDECS (fewer than 1000 units as of April 2010) is not large enough for any competitive pricing pressure to occur.</p>
<p>We do not believe the value of older equipment will drop dramatically. If vehicles continue to retain their value, the net worth and equity of a fleet will not be significantly lowered.</p>	<p>Older equipment values have dropped precipitously.</p>
<p>We expect that older, dirtier vehicles, when assessed, will still maintain the value they are worth when sold out of state. In the economic analysis of the regulation, we estimated the regulation's impact on the value of used vehicles to be about \$10 per horsepower.</p>	<p>Older equipment values have dropped precipitously.</p>
<b>TSD</b>	
<p>Population projected for 2009 = 191,714</p> <p>Population projected for 2010 = 194,727</p>	<p>Population reported in 2009 = 156,929</p> <p>Population projected by CARB (with assumptions about underreporting) as of 4/10 = ~175,000</p>
<p>Page 104 of TSD shows photos of 7 different VDECS installations</p>	<p>3 of the installations pictured clearly block the operator's view and are therefore in violation of Cal/OSHA regulations</p>
<p>Page 119 shows four DPF installations at LA Airport</p>	<p>3 of these installations clearly block the driver's view in violation of Cal/OSHA requirements</p>



Quotes from CARB ISOR, FSOR and TSD	FACTS
<p>The trends in the total value of construction and the change in the construction labor force are expected to increase over the next several years. These increases outweigh the economic impacts of the proposed regulation, both from a construction valuation perspective (which is predicted to increase by over \$10 billion over the next two years) and an employment perspective (predicted to increase by almost 40,000 jobs by 2009).</p>	<p>CARB now admits that since the Rule was adopted, the value of construction between 2005 and 2008 declined by 65%. Construction employment between 2006 and 2009 declined by 30%. The \$10 billion increase in construction valuation predicted by CARB not only did not occur, but in fact valuation declined by \$30 billion</p>
<p>The expected cost effectiveness of this regulation is \$2.30/lb for NOx and \$39.80/lb for PM. All costs are in 2006 equivalent expenditure dollars.</p>	<p>By CARB's own estimate, the Rule was the least cost-effective rule it had ever adopted for any private sector businesses. That cost-effectiveness analysis, however, was arbitrary and capricious, and not supported by the evidence in the record.</p> <p>The gross overstatement of emissions resulting from errors in the OFFROAD model flows through to the cost effectiveness calculations upon which the Rule was based. Assuming that CARB's estimate of a 40-100% overstatement of emissions, the cost per pound of emissions reduced would increase to as much as \$4.60 per pound for NOx and \$79.60 for PM.</p>