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January 27, 2010

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David Dickinson, Esq.
Compliance and Innovative Strategies Division (6405J)
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

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

Dear Mr. Dickinson:

The Associated General Contractors of America and its California chapters (collectively "AGC") submit these comments in response to the letter from James Goldstene, the Executive Officer of the California Air Resources Board ("CARB" or "Board") dated December 29, 2009, commenting on the above-referenced waiver request.

#### I. THRESHOLD MATTERS

A. There is no reason to rush approval of California's waiver request.

CARB's letter "reaffirms [the Board's] request that EPA act expeditiously," noting that "the first compliance reporting deadline is quickly approaching" and asserting that "[i]mmediate action" is needed to accomplish the following:

- "ensure that CARB has necessary data to determine whether the regulation adequately addresses the economic recession"; and
- "provide affected fleets with the necessary certainty . . . to develop appropriate business plans for compliance."

CARB does not require authorization to impose reporting requirements it points to as a reason for EPP to rush its action on the waiver request. Indeed, several of the Rule's reporting requirements have already taken effect. The initial reporting dates that the Rule established for large, medium and small fleets were April 1, 2009, June 1, 2009 and August,

# ENCLOSURE A

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January 11, 2010

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#### By Mail and Email

Mr. James Goldstene Executive Officer California Air Resources Board 1001 "I" Street P.O. Box 2815 Sacramento, CA 95812

Re: Emergency Petition for Two Year Extension of Deadlines for Meeting Fleet Average Requirements Included in the In-Use Off-Road Diesel-Fueled Fleets Regulation

#### Dear Mr. Goldstene:

On behalf of the Associated General Contractors of America, its California chapters and their approximately 33,000 members (collectively "AGC"), and pursuant to California Government Code section 11340.6, we petition the California Air Resources Board ("CARB" or "Board") to adopt an emergency amendment to the In-Use Off-Road Diesel-Fueled Fleets Regulation (the "Rule") to extend the deadlines for large fleets to meet the Rule's fleet average requirements for both nitrogen oxides ("NOx") and particulate matter ("PM") for at least two years.

We request this emergency action because the first of these deadlines will otherwise fall on March 1, 2010, and the second will fall on March 1, 2011. Unless the Board takes emergency action, the Rule will cause both irreparable and unnecessary damage to California's construction industry.

Since the Board approved the Rule in July of 2007, California's economy, and particularly its construction industry, has dramatically deteriorated. During the same period, the Board staff has amassed a great wealth of new data on the regulated fleets. By any measure, the data shows that fully one-third of California's construction industry has disappeared, and that the Rule's requirements are now well beyond "the economic limit of what industry [can] bear." AGC's conservative analysis of the new data makes it equally clear that the regulated fleets will meet the Board's emission reduction goals for at least the next two years, even in the

See "Staff Report: Initial Statement of Reasons For Proposed Rulemaking, Public Hearing to Consider Adoption of the Proposed Regulation for In-Use Off-Road Diesel Vehicles," April 2007 ("ISOR") at 3.

Mr. James Goldstene January 11, 2010 Page 2

absence of any fleet average requirements. Pending action on our prior petition for more extensive relief from the Rule, emergency action to extend the deadlines for large fleets is clearly warranted.

As early as December of 2008, the Board staff recognized that deteriorating economic conditions might well affect its assessment of whether the state needs the Rule.<sup>2</sup> At the Board meeting held in January of 2009, the Board itself went so far as to direct the staff to work with AGC on an analysis of the deteriorating economic conditions and their impact on emissions. As Chair Nichols stated:

"[Y]ou can't deny that the situation has changed since we adopted the rule. And it seems to me that it would make sense for the staff to meet with the petitioners and to discuss what kinds of information needs there might be that would cause you to think about whether there could be any appropriate modifications here that don't sacrifice the goal of getting us to -- we don't have a choice. We have to meet our SIP requirements. We have deadlines to meet that are beyond our purview to change.

"On the other hand, to the extent there are flexibilities that you might want to consider, this is an appropriate -- that would be an appropriate forum in which to consider them I think. . . .

"But I think along the lines of what others have said, we want to keep an eye on this. And we don't want to wait until next year or whatever in order to take another look at what's going on." <sup>3</sup>

At the time, the staff suggested that the necessary data would become available between April and August of 2009, when the Rule's various reporting requirements would take effect,

Transcript of CARB Board Meeting, January 22, 2009, 218:12-25, 219:5-8.

See Staff Report: Initial Statement of Reasons for Proposed Rulemaking; Proposed Amendments to the Regulation for In-Use Off-Road Diesel-Fueled Fleets and Implementation Update, Air Resources Board, December 2008 at page 2, 39: "Available fuel use data supports this, showing total off-road diesel fuel consumption from all sources (off-road vehicles, locomotives, marine, etc.) down over 10 percent from year 2007 levels (BOE, 2008). However, staff cannot precisely quantify at this time the extent of the decline in emissions from off-road vehicles subject to the regulation due to the poor economy. To better understand the impact of current economic conditions on fleets affected by the regulation and their emissions, ARB staff is evaluating available data on vehicle activity, as well as attempting to evaluate whether fleets may have changed their turnover practices due to the poor economy. Staff will present their findings at the January 2009, Board meeting."

Mr. James Goldstene January 11, 2010 Page 3

and the Board therefore directed staff to report to the Board on the impact of the economy on emissions in the Fall of 2009.<sup>4</sup>

The staff has now had that data for several months. Staff provided it to AGC on September 26. Nevertheless, to the best of our knowledge, and notwithstanding Chair Nichols' clear direction that "we don't want to wait until next year," the staff is just now beginning to perform the requested analysis. At its December 2009 meeting, the Board found it necessary to direct the staff, for a second time, to prepare a report on the economy and its effect on emissions.

On its own initiative, AGC has already performed the analysis, using the **same** model and making the **same** assumptions that staff used and made to develop the Rule, and changing only the inputs that the newly reported data brings into clearer view. That analysis supports AGC's original petition for extensive relief from the Rule, and even more strongly supports this request for emergency action. AGC provided the actual modeling results to the staff on December 3, 2009, and would welcome their verification. For the record of not only this petition, but also our prior petition, a copy is enclosed.<sup>5</sup>

In this regard, AGC has no doubt that "you can make the data say anything you want." This is why AGC based its initial analysis of the new data on the same model and assumptions that staff used to develop the Rule. Changing that model and/or those assumptions would obviously change the results. In due course, AGC intends to demonstrate that certain of the assumptions in CARB's model are demonstrably wrong, and that they grossly exaggerate even the latest estimates of emissions from the construction industry. Because even the grossly exaggerated emission forecasts produced by the model show the rule is unnecessary in the near term, AGC has not yet made any adjustments to account for these errors.

In response to AGC's initial findings, and in an effort to discredit them, the Board staff could well change the model and/or assumptions, but in doing so, it would merely succeed in raising questions about its intellectual integrity and competence, and all at a time when many continue to cast the staff in a doubtful light. At the end of the day, the staff can make an "apples-to-apples" comparison of the two emissions inventories only if and to the extent that it uses the same model and makes the same assumptions that it used at the outset of the rulemaking process.

<sup>&</sup>lt;sup>4</sup> *Id.* The Board directed staff to "report back to the Board in the fall of 2009 with an update on the offroad inventory, and a summary of the effects of the current economic downturn on emissions from off-road vehicles subject to the regulation."

See Exhibit A.

Among the flaws in the model is the assumption that the population of off-road equipment in the construction industry continued to grow in 2009.

Mr. James Goldstene January 11, 2010 Page 4

#### I. BACKGROUND

#### A. AGC's December 2008 Petition Does Not Require Immediate Action.

This is the second petition that AGC has filed in connection with the Rule. AGC filed its first petition on December 15, 2008, requesting the Board either to repeal or to stay the fleet average requirements until the Board could re-analyze the need for and cost of the Rule based upon the data that the staff has now amassed.

By mutual agreement between AGC and CARB staff, no action was taken on the 2008 petition pending receipt and analysis of the data that the Diesel Off-road On-line Reporting System ("DOORS") would generate in the spring and summer of 2009, and the evaluation of the extensive relief that AGC believed the facts would warrant. While AGC is requesting immediate action on this request for short term relief from the Rule, AGC is not, at this time, requesting any action on its 2008 petition for more extensive relief.

#### B. Contractors Need Immediate Relief from the Burdens of the Rule.

California's contractors need immediate relief from the fleet average requirements of the Rule, the first of which take effect on March 1, 2010. As we explain more fully below, the current economic crisis has left contractors struggling to survive, and for at least the next two years, it means that emissions of both NOx and PM will be far lower than expected.

The amendments that the Legislature directed CARB to make in 2009 do not go far enough to provide either consistent or genuine relief to California's contractors. They will certainly help some contractors for a short period of time, but they will just as certainly leave others struggling to meet the fleet average requirements for even the early years. They will also leave all contractors wondering where they will find the economic resources to comply with ever more stringent requirements in future years. As California's contractors contemplate the enormous effort necessary simply to survive this economic downturn—and whether the relatively few jobs that they can still provide are worth the struggle—even those who initially benefitted from the amendments must contemplate that it may all be for naught, as 2013 will come soon enough.

The amendments extended none of the deadlines for compliance with the fleet average requirements. In response, many contractors continue to retire equipment, reducing the size of their fleets. While this has the advantage of reducing the emissions from this industry, it also throws California residents out of work and raises serious questions about the state's ability to improve the environmental performance of its public and private infrastructure, much less meet its other needs. California's construction industry will continue to shrink, and jobs will continue to be lost, unless further relief is granted.

C. Reduced Emissions Resulting from the Current Economy Give the Board Flexibility to Reduce the Burdens of the Rule, While Still Meeting SIP Goals.

AGC analyzed the DOORS data using the same model and the same assumptions that staff used to develop the Rule. The only material difference between the modeling for Rule

development and AGC's modeling is that the AGC modeling is based on the new DOORS data. This data shows that the population of off-road equipment subject to the Rule is smaller, and the equipment mix is different, than CARB predicted when it developed the

The latest modeling . . . shows that the Rule is not needed to satisfy the SIP

Rule. As a result, diesel emissions are considerably lower than CARB had expected.

In fact, the latest modeling of off-road diesel emissions shows that the current Rule is not needed to satisfy the State Implementation Plan ("SIP") for reducing either NOx or PM emissions. For the next two years, fleet emissions will be well below the targets for both NOx and PM. Although the model indicates that additional PM reductions may be needed beginning in 2012, 7 the required reductions are much smaller than anticipated, and CARB can therefore modify the Rule and reduce its economic burden, while still meeting the SIP goals for PM.

The staff has advised both the Board and AGC that the additional data that fleets will report in March 2010 will be helpful in understanding how extensively the Board can revise the Rule and still comply with its SIP. That additional data will come from reports that large fleet owners are currently required to file in conjunction with the Rule's early deadlines for compliance with its fleet average requirements. While additional data is always useful, AGC believes that the currently available data already makes an overwhelming case for the limited amount of immediate relief that this petition seeks.

#### II. SHORT SUMMARY OF THE RULE

The Rule requires the owners of existing fleets of off-road equipment to reduce emissions of NOx and PM by quickly retrofitting, repowering or replacing their equipment. The Rule requires the owners of fleets that cannot meet the NOx fleet average standard for a particular year to either discard or turn over 8 or 10 percent of their horsepower in that year. It similarly requires the owners of fleets that cannot meet the PM fleet average requirements to retrofit 20 percent of their horsepower (total maximum) with the highest level of verified

These reductions are necessary to meet the SIP only if one uses the same assumptions about growth and activity as CARB used when it adopted the Rule. AGC believes, however, that CARB's original assumptions overstate the actual activity and growth rates, and when taken into account, these factors would show that even the PM portions of the Rule are unnecessary.

diesel emission control strategy ("VDECS") available for reducing PM emissions in the

respective engines. A VDECS will be considered the highest level VDECS available if it is the highest level device verified by CARB to be effective and durable for the engine on which it will be installed and if the system can be used safely.

In 2007, CARB estimated the cost of the Rule to be \$3 to \$3.4 billion—"the economic limit of what industry could bear."

In 2007, CARB estimated the cost of the Rule to be \$3 to \$3.4 billion—"the economic limit of what industry could bear." Actual experience in trying to comply with the Rule shows that the cost is much higher. In an economy where revenues are much lower, the Rule would be "beyond what the industry could bear" even if the original cost estimates were correct. The underestimation of the costs compounds the burden on industry.

#### III. GROUNDS FOR THE PETITION

A. California's Construction Contractors Will Suffer Immediate and Irreparable Harm if the Fleet Targets Are Not Extended by at Least Two Years.

California's construction contractors will suffer irreparable harm if they are forced to make their fleets smaller, or purchase and install expensive and unreliable emission control devices or repower their equipment in order to meet the 2010 and 2011 fleet average requirements of the Rule. The interim "credits" afforded by the amendments adopted earlier this year provide some relief to some contractors, but not to others, and certainly not to all. And even those relieved of the initial burdens will find that that their relief is fleeting, as they must, in any event, "catch up" with the Rule's original requirements by 2013.

Once a contractor spends scarce resources on new equipment, or repowering or retrofitting existing equipment, those resources are lost forever. Even if they wish do to so, many contractors simply cannot, however, make these investments, because they are unable to obtain financing. These contractors must either shrink their fleets or close down their businesses. These harms are irreparable. <sup>10</sup>

See "Staff Report: Initial Statement of Reasons For Proposed Rulemaking, Public Hearing to Consider Adoption of the Proposed Regulation for In-Use Off-Road Diesel Vehicles," April 2007 ("ISOR") at 3.

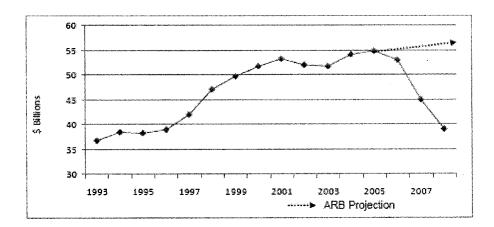
See Declarations in Support of Petition submitted on December 15, 2008, incorporated as if fully set forth herein.

<sup>&</sup>lt;sup>0</sup> *Id.* 

## B. Current Economic Conditions in the Construction Industry Will Not Improve Over the Next Two Years.

When the Board proposed the Rule in early 2007, staff relied largely on economic data for the period from 2002 to 2006. Staff predicted that the costs of the proposed regulation would reduce California's economic output in 2010 by roughly \$700 million, and cut statewide employment by approximately 1,000 jobs. Staff also estimated that the Rule would cut \$2.3 billion from personal income in that same year. Staff concluded that these impacts were at "the economic limit of what industry could bear."

The latest data for California's construction industry paints a very different picture from the one that staff originally expected see:



Real GDP Originating in California Construction Industry 1993-2008

Now that the economy has taken a dramatic turn for the worse, the economic costs and the environmental benefits of the Rule are much different than expected. As construction activity has dropped, emissions have also dropped, and the economic impact on individual construction contractors has increased. In today's economic environment, the earnings needed to cover the costs of compliance are simply impossible to achieve. The data on which staff relied during the rulemaking process is not a reliable guide to the very different future that California now contemplates.

13 Id. at 3.

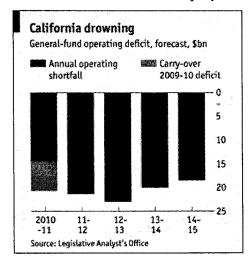
<sup>11</sup> ISOR at 46.

<sup>&</sup>lt;sup>12</sup> *Id*.

California's general economy is expected to lag any national recovery. According the University of California at Los Angeles Anderson School of Management, the outlook for 2010 is little or no growth for the state. Senior Economist Jerry Nickelsburg writes, "The economy will begin to pick up slightly in the beginning of 2011, and by the middle of 2011, will begin to grow at more normal levels."

The UCLA Anderson Forecast projects that unemployment is only going to get worse and is expected to rise to 12.7% in the fourth quarter of 2009. Total employment will contract by 4.3% in 2009 and no new jobs will be generated in 2010. Once growth returns in 2011, employment will begin to grow at a 1.7% rate and the unemployment rate will begin to fall. Although the economy should begin growing in 2011, it will not be generating enough jobs to drive the unemployment rate below double digits until 2012.<sup>14</sup>

This means the state's unemployment level, currently an all-time high of 12.5 percent, is



likely to stay high through 2011. Because construction is a lagging economic indicator, any reduction in unemployment in the construction industry is likely to occur even later.

The Anderson Forecast also pointed to California's complex budget crisis, noting that the state, in an effort to pass a budget last summer, did not solve its fiscal problems but only deferred them. In his forecast, Nickelsburg called the state's move "a head fake." Thus, an important factor affecting the rate of California's recovery is the major debt burden that the state faces. With the state budget in a continuing crisis, and local governments experiencing a raid on

their funds by the state, new public works projects have all but disappeared. This slowing in economic activity, and the unemployment it creates, make the state's debt problem ever more serious as tax revenues drop. The future for California's budget deficit is anything but bright and declining construction activity will not see any near-term turnaround.

Architects, who design and engineer new construction, are leading indicators of any recovery in the construction industry, since their services are needed months or years in advance of actual construction. From July 2008 through April 2009, 14 percent of architects lost their jobs and the unemployment rate for architects continues to grow.

See http://www.uclaforecast.com.

Mr. James Goldstene January 11, 2010 Page 9

The American Institute of Architects ("AIA") Consensus Construction Forecast Panel, which consists of the five major economic forecasters who specialize in the construction sector, characterizes the current situation as follows:

"There are signs that our economy is on the mend. However, nonresidential construction activity tends to lag behind the rest of the economy, so it will be a while

before this industry sees any improvement. The AIA's Consensus Construction Forecast Panel projects that nonresidential construction activity will decline almost 16 percent this year once inflation adjustments are made, and another 12 percent next year. If these numbers materialize, this would be the most significant downturn in nonresidential construction in more than a generation.

"the most significant downturn in nonresidential construction in more than a generation"

"Commercial facilities are slated to bear the brunt of the downturn. Overall commercial construction is forecast to decline 25 percent this year and another 15 percent in 2010. The hotel market, which may have been a bit overheated heading into the downturn, may take the biggest hit through 2010, but retail construction and offices won't be far behind. Industrial construction also will see a dramatic decline through 2010, with reduced demand domestically for manufactured goods as well as fewer manufactured exports due to an international slowdown." <sup>15</sup>

Spending on previously started projects masks the underlying weakness in new project activity. The AIA Architecture Billings Index, which measures design activity at U.S. architecture firms, has been declining since early 2008, indicating that there is substantially less activity at present in the design pipeline. McGraw-Hill Construction recently reported that construction starts on nonresidential buildings were down 43 percent through the first five months of 2009 compared to the same period in 2008.

In terms of the outlook, commercial projects—office, retail, and hotel facilities—are projected to see the steepest declines over this downturn, reaching almost 25 percent this year and another 15 percent next. According to the AIA forecast, nonresidential construction activity is destined for further declines before it recovers. The AIA Architecture Billings Index shows declining levels of design activity since early last year, and at present is still pointing to further declines.

The Panel's forecast shows continuing declines in all major types of construction:

http://info.aia.org/aiarchitect/thisweek09/0710/0710b\_consensus.cfm

#### **AIA Consensus Forecast Showing Changes from 2008**

	2009	2010	Cumulative by 2011
	% of change		
Nonresidential Total	-15.8	-11.6	▼ -27.4
Commercial	-24.9	-15.4	▼ -40.3
Office	-21.5	-17.3	▼ -38.8
Retail/Other Comm'l	-28.0	-12.6	▼ -40.6
Hotel	-25.8	-16.8	▼ -42.6
Industrial Total	-0.8	-28.4	▼ -29.2

As the economy has declined, business payrolls have shrunk. The economy has lost more than six million jobs since this recession began. The construction industry has taken some of the steepest losses. Although the construction industry accounts for just over 5 percent of all payroll employment in the economy, it has absorbed over 20 percent of job losses since the national economic downturn began. Some 326,000 California construction workers have lost their jobs in this recession.

Indeed, California's construction industry has been especially hard hit. The Construction

326,000 California construction workers have lost their jobs

Industry Research Board's ("CIRB") California Construction Review reports that the value of heavy construction projects in California has declined precipitously—from 2007 to 2008 the value plunged 29.4%, and

from 2008 to 2009 (11 months) the value dropped another 31.4%, a two-year decline of over 50%. <sup>16</sup>

The decline in public building projects in California is equally dramatic. CIRB reports that public building construction fell 37.3% in the first 11 months of 2009, continuing a decline that began in 2007. Further declines are projected for 2010, even with increased stimulus spending.<sup>17</sup>

These extraordinary changes in the economic circumstances mean that the various measures included therein are no longer feasible. As the Board sorts out the best way to proceed through and beyond the end of the decade, California's contractors must be afforded the interim relief they badly need simply to survive. Given the sharp decline in real GDP originating in California's construction industry, there can be no question that the short-term costs of the Rule are now well beyond anything that the industry can bear.

17 *Id.* 

<sup>&</sup>lt;sup>16</sup> Construction Industry Research Board, California Construction Review, December 22, 2009.

Mr. James Goldstene January 11, 2010 Page 11

#### C. AGC Analyzed the Effects of the Recession Using ARB's Own Model.

In order to quantify the impact of the recession on emissions, AGC retained Sierra Research, a well-respected air modeling consultancy based in Sacramento. AGC presented the results of Sierra's modeling to CARB staff on December 3, 2009. That presentation is enclosed as Exhibit A to this Petition.

AGC asked Sierra to use the same model and make the same assumptions that ARB used and made in developing the rule, but to substitute the actual data that CARB collected in 2009 for the Board's earlier estimates of (a) the population of off-road equipment, (b) its age distribution, and (c) its horsepower distribution. AGC directed Sierra to make no other changes to CARB's model or its assumptions.

Emissions from the regulated fleets will be well below the targets for both NOx and PM emissions even without the burdens of the Rule

Sierra's analysis, which was generally praised by CARB staff, makes it clear that the current recession has reduced construction activity in California to levels that result in lower emissions of NOx without the Rule than CARB projected even with the Rule. The modeling shows that this will continue to be the case until at least 2019. The same is true for PM emissions at least through 2011. For at least the next two years emissions from the regulated fleets will be well below the targets for both NOx and PM emissions even without the burdens of the Rule. <sup>18</sup>

To satisfy the SIP, the Rule sought to reduce NOx emissions from the regulated fleets to 298.4 tons per day ("tpd") in 2010 and to 273.3 tpd in 2011. AGC's conservative analysis of the DOORS data shows that, without the Rule, NOx emissions will be down to 222.5 tpd in 2010 and down to just 210.9 tpd in 2011.

The Rule similarly sought to reduce PM emissions to 14.4 tpd in 2010 and to 11.7 tpd in 2011. AGC's conservative analysis of the DOORS data reveals that, without the Rule, PM emissions will be just 12 tpd in 2010, and 11.4 tpd in 2011.

There can be no question that the NOx and PM fleet targets are unnecessary for meeting SIP requirements for at least two years. The Board has the latitude to extend the Rule's fleet average and related requirements for at least two years without compromising any of its original objectives.

But see, footnote 7 supra.

#### IV. LEGAL AUTHORITY TO PROVIDE EMERGENCY RELIEF

A. Changes in Circumstances that Require an Emergency Amendment Extending the Rule's Deadlines by Two Years.

Changes in economic, financial and other circumstances provide ample basis for extending the Rule's fleet target dates by two years. In particular:

- The Rule is no longer needed in its current form to meet the 2015 SIP goals.
- Even before the current economic crisis, CARB staff concluded that the Rule's requirements were at "the economic limit" of what the industry could bear. Dramatic reductions in industry employment, fleet size and GDP make it clear that the Rule's burdens are now far more than the industry can bear.

The requirements for petitioning for amendment or repeal of a regulation are set forth in Government Code section 11340.6:

"[A]ny interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation as provided in Article 5 (commencing with Section 11346). This petition shall state the following clearly and concisely:

- (a) The substance or nature of the regulation, amendment, or repeal requested.
- (b) The reason for the request.
- (c) Reference to the authority of the state agency to take the action requested."

The reasons for this request have already been addressed above; the following sections describe the Board's authority to act.

#### B. Relief Requested

In light of the new circumstances described herein, AGC requests that the Board immediately extend all of the fleet average deadlines for two years. During this period, the staff will have the time that it requires to gather additional data, to undertake further analyses, and to develop and make recommendations for such further adjustments as the data and analyses may warrant.

AGC is also amenable to revising the Rule's reporting requirements to provide opportunities for fleet owners routinely to report the hours of use for their off-road equipment. Such data might be useful, for example, in determining whether measures imposed by the Rule are actually targeting the largest sources of emissions.

Mr. James Goldstene January 11, 2010 Page 13

In addition, AGC respectfully requests that the Board advise the EPA that it need not act on the waiver request for the rule until such time as the issues raised by this Petition have been resolved.

#### C. Authority to Take the Action Requested

The authority of CARB to take the action requested is found in the following provisions of the Health and Safety Code:

Section 39002 ("The control of vehicular sources, except as otherwise provided in this division, shall be the responsibility of the State Air Resources Board");

Section 39600 ("The state board shall do such acts as may be necessary for the proper execution of the powers and duties granted to, and imposed upon, the state board by this division and by any other provision of law");

Section 39601 ("The state board shall adopt standards, rules, and regulations in accordance with the provisions of Chapter 3.5 (commencing with Section 11340) of Part 1 of Division 3 of Title 2 of the Government Code, necessary for the proper execution of the powers and duties granted to, and imposed upon, the state board by this division and by any other provision of law");

Section 39602 ("The state board is designated the air pollution control agency for all purposes set forth in federal law. The state board is designated as the state agency responsible for the preparation of the state implementation plan required by the Clean Air Act (42 U.S.C., Sec. 7401, et seq.) and, to this end, shall coordinate the activities of all districts necessary to comply with that act");

Section 43000 ("The state has a responsibility to establish uniform procedures for compliance with standards which control or eliminate [air pollutants from motor vehicles]");

Section 43000.5 ("The state board should take immediate action to implement both short- and long-range programs of across-the-board reductions in vehicle emissions and smoke, including smoke from heavy-duty diesel vehicles, which can be relied upon by the districts in the preparation of their attainment plans or plan revisions pursuant to Sections 40911, 40902, and 40925");

Section 43013 ("(a)The state board may adopt and implement motor vehicle emission standards, in-use performance standards ... for the control of air contaminants and sources of air pollution which the state board has found to be necessary, cost-

Mr. James Goldstene January 11, 2010 Page 14

effective, and technologically feasible, to carry out the purposes of this division, unless preempted by federal law.

"(b) The state board shall, consistent with subdivision (a), adopt standards and regulations for ... off-road or nonvehicle engine categories...");

Section 43018 ("(a) The state board shall endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state standards at the earliest practicable date.

\* \* \*

"(e) Prior to adopting standards and regulations pursuant to this section, the state board shall consider the effect of the standards and regulations on the economy of the state, including, but not limited to, motor vehicle fuel efficiency.").

#### V. CONCLUSION

Pursuant to California Government Code section 11340.6(a), AGC requests that the Board immediately extend the fleet average and related requirements of the Rule for two years. In addition, AGC would support amending the Rule to require reporting of hours of use, in order to more accurately characterize the sources of emissions. Finally, AGC respectfully requests that the Board advise the EPA that it need not act on the waiver request for the rule until such time as the issues raised by this petition have been resolved.

Because the first deadline for meeting fleet targets is March 1, 2010, **time is of the essence** and this petition has therefore been submitted as an emergency measure. AGC therefore requests immediate action on this petition. In the event CARB staff denies this petition, AGC respectfully requests the opportunity to present the petition to the full Board at its February 2010 meeting.

Respectfully submitted,

Dichael J. Steel mje

Attorney for Petitioner,

Associated General Contractors of America

Enclosure

cc: Michael Kennedy, General Counsel, AGC (w/ enc.)

David Dickinson, Esq. January 27, 2010 Page Two

2009, respectively. What the Board characterizes as the "first compliance reporting deadline" is actually the first of the annual dates on which "large" fleets have to update much of the information that they first reported in 2009.<sup>2</sup> With or without EPA authorization for the Rule's emissions standards, that reporting deadline and virtually all of the Board's other reporting requirements are and already enforceable.

#### В. CARB already has data showing the Rule is not needed to meet its air quality goals.

The 2009 reporting by all fleets provided CARB with a great wealth of new data on the offroad equipment subject to the Rule.

On its face, this data reveals that this population of equipment is both smaller and newer than the Board believed when it developed the Rule. When analyzed using the very same computer model that CARB use to develop the Rule, this data also shows that:

- the NOx and PM emissions from this population of equipment are far smaller than the Board believed:
- in the absence of the Rule, the NOx and PM emissions from this population of equipment will continue to be well below the Boards' original projections at least through 2025;
- in the absence of the Rule, NOx emissions from this population of equipment will below the Board's goal at least through 2020; and
- in the absence of the Rule, PM the emissions will be below the Board's goals for at least two years and perhaps the life of the Rule.

The Board also knows that California's construction industry is in exceptionally dire straits. Real GDP, employment and the equipment population in the State's construction industry are all down sharply. By all three measures, roughly a third of California's construction industry has simply disappeared. Well over 300,000 of California's construction workers have lost their jobs. Between 2007 and 2009, the value of heavy construction projects in California dropped 50%. At the time it adopted the rule, the Board acknowledged that the Rule imposed burdens at "the economic limit of what industry [can] bear." With the enormous deterioration in the industry since the Board made that finding, it is clear that the economic burdens are now more than the industry can bear.

See §2449(g)(2).

See 17 Cal. Code Regs. §2449(g)(1). Unless otherwise noted, all citations are to Title 17 of the California Code of Regulations, and are sometimes collectively referred to as the "Rule.".

See "Staff Report: Initial Statement of Reasons For Proposed Rulemaking, Public Hearing to Consider Adoption of the Proposed Regulation for In-Use Off-Road Diesel Vehicles," April 2007 ("ISOR") at 3.

David Dickinson, Esq. January 27, 2010 Page Three

As noted in AGC's initial comment on the waiver request, in late 2008 AGC petitioned CARB to reconsider and/or amend or repeal the Rule, primarily (but not entirely) in light of the new economic realities. In that petition, AGC still seeks significant changes to the Rule. By mutual agreement, however, AGC and CARB decided that the agency should take no action on the 2008 petition pending receipt of the 2009 reporting data; that standstill is still in effect.

On January 11, 2010, AGC filed a second petition to amend the Rule. In this second petition, AGC seeks more limited but immediate, emergency relief from the Rule. Specifically, AGC urges the Board to extend the approaching deadlines for large fleets to satisfy the Rule's fleet average requirements for two years. Enclosed with this letter (as Enclosure A) is a full and complete copy of AGC's new petition. Also enclosed (as Enclosure B) are the results of AGC's independent analysis of the new data that CARB has collected, as its various reporting requirements have taken effect. AGC provided these results to the CARB staff on December 3, 2009, and subsequently, to the Board itself, as an attachment to its second petition. Together, these documents demonstrate that CARB already has enough data to assess the recession's effects on emissions from the regulated fleets of off-road equipment. Any argument that CARB needs more time to evaluate the data collected last year is dubious, but if more time is needed, thee is even less reason to rush action on the waiver.

#### C. CARB has not provided sufficient lead time for the Rule.

In its June 12, 2009 letter to EPA, CARB conceded that construction contractors did not yet have "the certainty they need to meet their obligations and responsibilities." In its latest letter, CARB adds that, at the eleventh hour, these business men and women are still lacking the certainty they require, and remain unable make appropriate business plans. In the six months between June and December of 2009, nothing changed. CARB made absolutely no effort to allow for the time that EPA requires to render a decision on CARB's request for

See Letter from Michael Jacob Steel to Michael Terris dated December 7, 2009, which CARB attached to its letter of December 29, 2009, as Attachment B.

In its latest letter to EPA, CARB alludes to these results but neglects to provide a copy.

AGC suspects that CARB would dispute this point, but quite frankly, the association finds it difficult to determine the Board's precise position on its new data, or AGC's analysis of it. The Board "does not concede the accuracy of AGC's claims," but stops short of disputing them. The Board asserts that the new data is "potentially incomplete" but stops short of disputing that this data is the best available and vastly superior to anything on which the Board had at the time it developed the Rule. The Board complains that AGC makes "unverified projections of how and when the economy will recover in the future," but neglects to note that AGC used precisely the same computer model—including the Board's assumptions about future economic growth—that the Board used to develop its original emissions inventory. If the growth factor built into that model is unverified, then one would have to ask CARB to explain why that factor is nevertheless appropriate to use.

David Dickinson, Esq. January 27, 2010 Page Four

authorization to adopt and enforce the Rule. How EPA might still determine that CARB has given these fleets adequate lead time is difficult to fathom.

#### D. AGC reiterates its request for public hearings in California.

AGC continues to disagree that EPA has held a properly noticed hearing on CARB's request. The one hearing that EPA did hold was in Washington, DC, more than 3,000 miles from the affected construction contractors, less than three weeks after "tentatively" announcing the date, and without any public notice of its final decision to hold the hearing on that date. AGC understands that fewer than 10 people attended the EPA "hearing." By contrast, over 200 people attended a CARB workshop on the agency's diesel rules in December 2009. There is obviously significant public concern about CARB's diesel rules—concern EPA must not ignore by holding only one poorly noticed and poorly attended meeting in Washington, D.C.

California hearings would be consistent with basic EPA guidance on public participation in the regulatory process,<sup>7</sup> which provides:

"Generally, the Agency should provide materials for public comment as soon as they are available and should allow for at least 30 days for the public review and comment (or longer, as specified in program-specific requirements) or 45 days notice for public hearings."

#### And as EPA has explained:

"The fundamental premise of this Policy is that EPA should continue to provide for meaningful public involvement in all its programs, and consistently look for new ways to enhance public input. EPA staff and managers should seek input reflecting all points of view and should carefully consider this input when making decisions. They also should work to ensure that decision-making processes are open and accessible to all interested groups, including those with limited financial and technical resources. . . ."

Once again, AGC urges EPA to let the public be heard on this important Rule by holding hearings in California and after giving the public appropriate notice.

<sup>&</sup>quot;Public Involvement Policy of the U.S. Environmental Protection Agency" (May 2003). http://www.epa.gov/publicinvolvement/pdf/policy2003.pdf). Emphasis added.

Id. at page 13.
 Id. at page 1.

David Dickinson, Esq. January 27, 2010 Page Five

#### II. RIPENESS

The Rule is not yet ripe for authorization. Indeed, CARB's latest letter makes it more than clear that the Rule remains far from final. "Over the past year," CARB admits, it has revisited the Rule "on three separate occasions," and "twice amended" it. CARB has "further committed to revisiting the issue on several more occasions...." More staff reports on the Rule are due in April and July of 2010. As noted below, CAL/OSHA has yet to complete a closely-related rulemaking that directly bears on the technical feasibility of complying with significant portions of the rule. And as noted in the preceding section of this letter, AGC has already filed two petitions to amend the Rule.

By mutual agreement, AGC and CARB have suspended the deadline for CARB to act on the first petition, pending their joint review and analysis of the data that CARB collected in 2009 and will continue to collect in the future. While both parties remain free to reinstate the deadline, neither has taken that step. Notwithstanding AGC's growing doubts about the Board's decision-making, and whether data will actually drive that process, AGC continues to make its very best efforts to demonstrate that the Board can make the changes that AGC has requested without compromising the Board's environmental objectives, and further, that the Board has good reason, based on sound public policy, to make those changes. <sup>10</sup>

AGC will not agree to suspend the deadline for CARB to act on AGC's second petition to amend the Rule, because California's contractors need emergency relief from the deadlines for large fleets to comply with the fleet average requirements. The first March 1 deadline is now imminent, and agreeing to a delay would frustrate the purpose of the petition. The applicable regulations require the Board's Executive Officer to make a decision by February 11. If the Executive Officer denies the petition, AGC will promptly appeal his decision to the full Board, and to that end, AGC has also made a conditional request for a Board hearing on its petition in February of 2010.

In due course, AGC intends to demonstrate that certain of the assumptions embedded in CARB's computer model are demonstrably wrong, and that they grossly exaggerate even the latest estimates of emissions from the regulated fleets. *See* Millstein, D. and Harley, R., "Revised Estimates of Construction Activity and Emissions: Effects on Ozone and Elemental Carbon Concentrations in Southern California," Atmospheric Environment 43 (2009), at 6328-6336 (enclosed as Enclosure C)("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."). Once AGC completes its analysis of these assumptions, it is likely to become clear that California does not need any off-road rule to meet and even exceed the emission reduction goals that CARB intended to the Rule to achieve. Nevertheless, AGC is not seeking complete repeal of the Rule. As noted in the text, AGC is merely seeking to amend the Rule to regulate all fleets over the same period and to the same extent that Rule now regulates small fleets.

David Dickinson, Esq. January 27, 2010 Page Six

In sum, the final form of the Rule remains far from settled. The Rule has been and remains in a state of almost constant flux, and EPA has to expect that CARB will further amend the Rule in potentially significant ways.

#### III. CONSISTENCY WITH SECTION 202(A)

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).

#### A. The Rule's requirements are not technologically 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. This Rule, unlike most others, applies to equipment already in the field, and that is where the technology must be proven to be feasible.

The Rule applies to a huge variety of construction equipment. Unlike trucks or other on-road vehicles that carry transport refrigeration units (TRUs), this equipment comes in a myriad of sizes, shapes and configurations. The equipment may have tracks, rubber wheels or other means of motive power, depending on the nature of the terrain that it has to traverse. Much of this equipment has "arms" that it must extend and move in unique ways. The operators of this equipment are skilled professionals well aware of the damage that it can cause, and the injuries that it can inflict. What is feasible to attach to this equipment, and what cannot and cannot be fit into its existing engine compartments, or coupled with its existing transmissions, varies from one piece of equipment to another.

In its ISOR, CARB acknowledged that the vehicles subject to the Rule are "diverse," that they would include everything from "off-road vehicles with engines as small as 25 hp to those with engines bigger that 2,500 hp," and in fact, that the Rule would affect "any mobile (i.e. self-propelled) diesel fueled vehicle that cannot be registered and licensed to drive onroad." In its Technical Support Document, CARB went on to identify 19 different "equipment types" in the "construction and mining" category. 12

<sup>11</sup> ISOR at 17.

TSD, Appendix E, at E-1

David Dickinson, Esq. January 27, 2010 Page Seven

To learn more about this unusually diverse population of equipment, EPA should review the web sites that the leading auctioneers of this equipment use to conduct their business. One is Ritchie Brothers Auctioneers, whose web site bears the URL <a href="www.rbauction.com">www.rbauction.com</a>. On January 17, 2010, this web site featured 99 different classes of construction equipment, including 38 classes that appeared to be subject to the Rule. The web site also identified an average of 10 different manufacturers of the equipment in each of these 38 classes. In

# B. CARB has failed to rebut the declarations of actual contractors testifying that retrofits are not feasible.

In the record of these proceedings, EPA will find more than ample evidence that the Rule does not meet this standard. As stated by one contractor:

"The CAT dealer reports that it may have some DPFs for some larger tractors but I have no CAT equipment. The John Deere dealer has nothing to offer. Neither the dealer not its engine supplier had any experience with filters. The Case dealer knows nothing and offers no help whatsoever.

"We have also contacted Huss and Valley Power Systems.... The quotes were specific on price but not on the method or materials to accomplish the installation. No examples could be provided of any previous work on equipment like mine--backhoes, small dozers, compactors and reachlifts. Nor could Huss assure me that my engines are ready to receive a filter.

"I can get that assurance only after I install filters and they discern if the engines are operating well enough as to the fuel injection system and/or wear-and-tear. The warranty only covers the filter, and not my engines, and there is no assurance that the condition of my engines is good enough to be fitted with the filter. There is no trial filter that can be mounted temporarily to assess the effects on my engines, and there are no other completed tractors to investigate for reference." <sup>15</sup>

See Enclosure C to this letter. For example, All Terrain Vehicles, Articulated Dump Trucks, Booms, Compactors, Rollers, Vibratory Padfoot Compactors, Vibratory Smooth Drum Rollers, All Terrain Cranes, Crawler Cranes, Rough Terrain Cranes, Crawler Loaders, Crawler Tractors, Dumpers, Demolition Excavators, Hydraulic Excavatorsm, Midi Excavators, Mini Excavators, Mobile Excavators, Loader Backhoes, Motor Graders, Motor Scrapers, Rock Trucks, Skid Steer Loaders, Skip Loaders, Tandem Rollers, Wheel Dozers, Wheel Loaders, Asphalt Pavers, Drills, Material Handlers, Forklifts, Rough Terrain, Forklifts, Pipelayers, Trenchers.

<sup>&</sup>lt;sup>14</sup> Id

Declaration of Robert Dorazio, paragraphs 4, 5 and 6, attached as Exhibit C to the December 15, 2008 Petition included with AGC's comments on the waiver request.

David Dickinson, Esq. January 27, 2010 Page Eight

"I requested recommendations and pricing from the four dealers above about the same time (approximately September 1, 2008). Two of the four firms have not responded with any substantive proposals, though they have periodically called me to let me know that they are still trying to piece together some recommendations for our fleet. They want to sell me something, but have nothing substantive to offer. The two firms responding did so with similar recommendations/proposals within two weeks, though their proposals were far from complete, due to a lack of appropriate product. Their recommendations were primarily to utilize filters that were still in the verification review process, meaning that they weren't available for purchase yet." 16

Regarding the cost of compliance, an equipment supplier retained a consultant to analyze the costs of compliance for fleets with horsepower ranging from 11,000 to 43,000. That analysis showed that "the cost of compliance ranges from about \$1,200 to \$1,600 per horsepower, nearly ten times higher than the ARB estimate."

One year later, these declarations remain unimpeached and unrebutted. During this period, CARB has repeatedly conceded that the Clean Air Act requires the requisite necessary technology to be technically feasible to both manufacture and apply, 18 but made no effort to address "the myriad of different vehicle applications from different vehicle manufacturers." Quite to the contrary, CARB's comments highlight the fact that the technical feasibility of applying or installing the necessary technology remains a very open question.

The Rule applies to a truly unique and highly diverse population of equipment, and CARB's request for authorization to adopt and enforce the Rule therefore requires EPA to consider and address the feasibility of not merely manufacturing but also applying or installing technology to a far great extent than any past proceeding of which AGC is aware.

Declaration of Mark Berry, paragraph 6, attached as Exhibit E to the December 15, 2008 Petition included with AGC's comments on the waiver request. *See also*, Declaration of Kevin Willy, paragraphs 2 and 3.

Declaration of Gary Rohman, paragraphs 3 and 4, attached as Exhibit I to the December 15, 2008 Petition included with AGC's comments on the waiver request.

CARB comments on waiver dated June 12, 2009 at 9; CARB comments on waiver dated December 29, 2009 at 6.

<sup>19</sup> CARB comments on waiver dated June 12, 2009 at 14.

David Dickinson, Esq. January 27, 2010 Page Nine

C. CARB has failed to address the safety concerns raised by the Rule—concerns CARB itself has said make "major portions of the off-road regulation [are] no longer viable."

CARB's comments completely fail to address the safety issues raised in the petition granted by the California Department of Industrial Relations, Division of Occupational Safety and Health ("Cal/OSHA") Standards Board.

According to CARB staff, "most if not all of the retrofits required by the off-road regulation could become impossible to install" in light of safety issues identified by the Standards Board, contractors and labor representatives. Staff has also admitted that in light of these safety concerns, "major portions of the off-road regulation [are] no longer viable."

In finding that the VDECS it examined violated California's worker safety laws, Cal/OSHA stressed that "[n]umerous fatal and serious accidents have occurred from ... operators not seeing workers in the path of a backing or turning equipment." *Id.* The risk to workers is clear from the photographs reproduced in the December 2008 petition attached to AGC's initial comments on the waiver request, where a man can be seen standing behind the equipment without the VDECS, but is obscured when the VDECS is installed.

Remarkably enough, the potential for worker fatalities resulting from VDECS installations was not discussed in the ISOR or FSOR, except to note that a procedure for obtaining a ruling on from CARB's Executive Officer is set forth in the Rule itself.<sup>23</sup> That procedure, however, is itself unlawful and CARB has failed to address this legal defect in the Rule.<sup>24</sup>

In its most recent letter to EPA, CARB attempts to gloss over the safety problems by pointing to an "Interim Visibility Policy" that CARB says "exempts fleets from having to install a VDECS under the CARB regulation if installation would result in impairing a vehicle operator's visibility." The "exemption" that the Interim Policy provides, however, is illusory, just as are so many of the purported "exemptions" in the Rule. Like other so-called exemptions, the exemption of a vehicle that cannot be safely retrofitted simply shifts the

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

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.")

Cross Letter at p. 3.

See 17 Cal. Code of Regulations section 2449(e)(8).

Although the Rule purports to authorize CARB to make a determination as to the safety of VDECS installations, CARB lacks any legal authority to make decisions relating to safety. Thus, the portion of the Rule that purports to give CARB's Executive Officer the power to determine the safety of VDECS installations is unlawful. That authority is vested solely and exclusively in Cal/OSHA. Labor Code section 142.3(a).

David Dickinson, Esq. January 27, 2010 Page Ten

burden of compliance to the remaining vehicles—actually increasing the percentage of vehicles that must be retrofitted under the Rule. As explained by CARB:

"consider a fleet with 100 vehicles that was required to retrofit 20 vehicles for the March 1, 2010, requirements. Assuming that 50 of the fleet's vehicles could be retrofit without any masking and 50 could not due to the Interim Visibility Policy; the fleet would still have to retrofit 20 vehicles from among the 50 that could be retrofit without creating visibility impairment."<sup>25</sup>

In effect, CARB's example fleet is being required to retrofit the same number of vehicles whether or not there are safety issues, effectively doubling the burden to 40% of the vehicles that could be retrofit.

Furthermore, this "Interim Policy" is just that—a temporary Band-Aid that applies only to retrofits required to meet the March 2010 deadline. It is not a rule or amendment to a rule, but simply a temporary "fix." Granting a waiver where such a critical issue remains completely unresolved (but for a temporary and non-binding "policy") is not appropriate.

With "most if not all" retrofits called for by the Rule impossible to install, EPA cannot properly find that either adequate lead time has been provided or that the retrofits are "technologically feasible."

#### D. Other "exemptions" provided by the Rule are also illusory.

CARB repeatedly points to the exemptions and credits provided by the Rule as examples of flexibility that facilitates compliance. The exemptions, however, are largely illusory because, like the safety exemption, they simply move the burden to the remaining vehicles in the fleet. Indeed, CARB argues that making the exemptions real—that is, granting compliance credits for exempt vehicles—is "nonsense." And so CARB's purported flexibility is merely a shell game by which the burden that must be met shifts from the supposedly exempt vehicles to the remaining fleet, providing no relief to the contractor.

Note that none of the exemptions provides for any consideration of cost, and that they are therefore insufficient, on their face, to demonstrate consistency with Section 202(a).

Frequently Asked Questions In-Use Off-Road Diesel Vehicle Regulation, available at <a href="https://www.arb.ca.gov/msprog/ordiesel/documents/visibilityfaq.pdf">www.arb.ca.gov/msprog/ordiesel/documents/visibilityfaq.pdf</a>.

Memorandum from Martley Hart, Executive Officer of the Cal/OSHA Standards Board, dated January 6, 2010 available at <a href="www.arb.ca.gov/msprog/ordiesel/documents/162010memo.pdf">www.arb.ca.gov/msprog/ordiesel/documents/162010memo.pdf</a>. Note that the Standards Board expects to propose new regulations on the issue in the summer of 2010 after conducting a series of field tests. Thus, the safety issue remains a critical concern, and CARB's initial conclusion that "most if not all of the retrofits required by the off-road regulation could become impossible to install" in light of safety concerns remains valid.

CARB Comments on Waiver Request dated June 12, 2009, at page 16.

David Dickinson, Esq. January 27, 2010 Page Eleven

#### E. CARB misstates AGC's earlier comments on the costs that the California Department of Transportation ("Caltrans") will incur to comply with the rule.

Although CARB admits that costs for VDECS installed as of late 2008 were about 30% higher than ARB initially estimated, it argues—again with no support—that in the future the costs will drop to a point where, on average, they are consistent with the estimates in the rulemaking record. In effect, CARB is saying "yes, we were off by 30%, but eventually it will all work out." AGC believes these arguments are entitled to no deference.

CARB notes that AGC claims that the costs of compliance have been wildly underestimated, as evidenced by recent budget request by Caltrans<sup>28</sup> and goes on to say that AGC "implies" that the cost would be \$260 million. There was no such implication, and AGC was clear in stating that this figure was for all diesel-related rule costs. But this is merely a strawman set up by CARB. The real issue—the extraordinary cost of compliance even by the state's own transportation agency—is indisputable.

CARB selectively cites Budget materials submitted by Caltrans showing that the 2010 cost of compliance would be reduced from \$16,411,000 to about \$11 million, a reduction of \$5.4 million. What CARB omits is the statement in the Senate Report it cites, to the effect that "[t]he modified request is \$5.4 million less, but it should be noted this represents a deferral of costs instead of long-run cost savings."<sup>29</sup> The Senate Subcommittee report goes on to state that "it is unfortunate that cost is significantly higher than the original ARB estimate." <sup>30</sup>

The fact of the matter is that Caltrans' calculations of its costs show a per horsepower cost of about \$478<sup>31</sup> compared to CARB's estimate of a per horsepower cost of \$80 to \$93 in CARB's Economic and Fiscal Impact Statement prepared at the time the Rule was adopted.<sup>32</sup> When one compares an estimated cost of up to \$93 per horsepower to an actual cost of \$478 per horsepower, a characterization of the underestimate as wildly inaccurate seems entirely appropriate.

#### IV. COMPELLING AND EXTRAORDINARY CONDITIONS

In a strained effort to effort to demonstrate that California requires the Rule to meet compelling and extraordinary conditions, CARB's latest letter erects and then knocks down

<sup>28</sup> CARB waiver comments dated December 29, 2009 at page 8.

<sup>29</sup> Id. at page 9 and see also footnote 37 thereof.

See Senate Subcommittee Agenda dated April 30, 2009 attached to AGC comments on the waiver dated August 10, 2009, at 16.

<sup>32</sup> See Economic and Fiscal Impact Statement, CARB dated October 23, 2007 at pages 2 and 5.

David Dickinson, Esq. January 27, 2010 Page Twelve

several straw men. AGC does not contest that numerous air basins in California continue to be out of attainment with the National Ambient Air Quality Standards (NAAQS for ozone and/or fine particulate matter (PM2.5).

AGC does, however, contend that California cannot support any argument that California's construction contractors are responsible for any failure to meet those standards. Using CARB's own computer model, AGC has already established that California will exceed the Board's goals for reducing PM emissions from such equipment for the next two to four years without any rule of any kind. AGC has similarly established that California will exceed the Board's goals for reducing NOx emissions from such equipment for at least the next ten years without any rule of any kind. If California fails to meet the NAAQS, it will not be for any lack of success in reducing emissions from California's construction contractors.

#### V. CONCLUSION

In December 2009, CARB staff argued to its Board that additional time was needed to evaluate whether changes need to be made to the Rule. The Board gave the staff the time it requested, calling for further discussion of the Rule at its April and July meetings. Days later, staff writes to EPA pleading for immediate action granting the waiver. AGC submits that the positions the staff is taking with its Board and with EPA are contradictory, and reflect a desire to avoid any thoughtful or thorough analysis of the basis for the Rule, its actual impact on California's contractors or the need for the Rule.

EPA should, at a minimum, wait for the many issues highlighted by both CARB and AGC's comments to be resolved by the Board. In the alternative, AGC believes there is sufficient basis in the record to deny the waiver request now.

A A

Michael Jacob Steel

**Enclosures** 

cc: Michael Terris, Esq. w/encs.

Michael Kennedy, Esq. w/encs.

# ENCLOSURE B













# A Fresh Look

at California's New In-Use Off-Road Diesel-Fueled Fleets Regulation December 3, 2009

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Direct: 703-837-5335 Email: kennedym@agc.org



# California's New In-Use Off-Road Diesel-Fueled Fleets Regulation

- Approved in July 2007
- Established reporting requirements that took effect in April (large fleets), June (medium fleets) and August (small fleets) of 2009
- Established fleet average requirements that will take effect in March of 2010 (large fleets), 2013 (medium fleets) and 2015 (small fleets)
- Applies to four industry categories but just one of the four (Construction and Mining) accounts for at least 80% of the covered pieces of equipment



















## **Scope of Review and this Presentation**

- 2000 Emissions Inventory
- 2009 Emissions Inventory
- Similarities and Differences in the Results
- Implications for the Rule
- Final Note



















## **2000 Emissions Inventory**

- Baseline values for calendar year 2000 (Surveys and Studies)
- Total Population of Equipment (Each Type)
- Age Distribution of Equipment (Each Type)
- Horsepower Distribution (Each Type)
- OFFROAD model projections for future years
- Constant rate of annual growth in population, equal to nearly 2% for "Construction and Mining" category



















### **2000 Emissions Inventory**

- The Economic Context
- Period of steady growth in California GDP originating in construction
- Positive growth in 9 of the 12 years beginning in 1993 and running through 2004
- Annual rates varied widely, falling as low as
   -0.6% but climbing as high as 7.8%
- Cumulative growth of 14.2% (\$5.2B) from 1993 to 1997 and another 25.1% (\$11B) from 1997 to 2005

Real GDP Originating in California				
Construction Industry (\$ Millions)				
Year SIC NAICS				
1993	36,704			
1994	38,414			
1995	38,270			
1996	38,880			
1997	41,925	43,751		
1998		47,107		
1999		49,672		
2000		51,716		
2001		53,178		
2002		52,009		
2003		51,695		
2004		54,125		
2005		54,747		

Source: Bureau of Economic Analysis, U.S. Department of Commerce











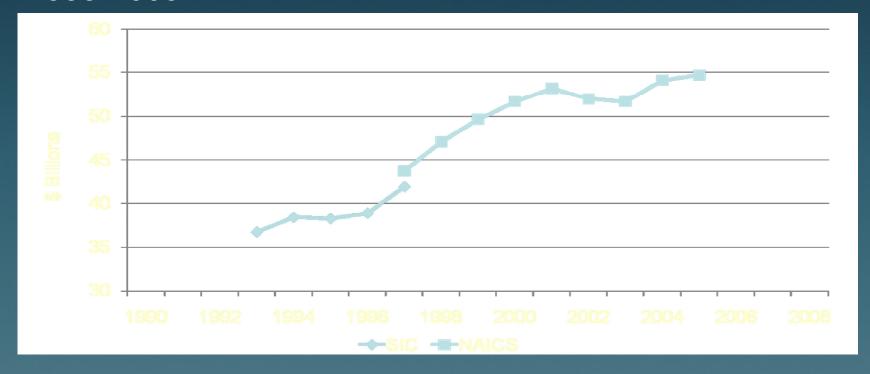








# Real GDP Originating in California Construction Industry 1993-2005



Source: Bureau of Economic Analysis, U.S. Department of Commerce



















### **2000 Emissions Inventory**

- The Economic Context
- Also period of steady growth in total employment in California's construction industry
- Positive growth in all 12 years beginning in 1993 and running through 2004
- Annual rate reached 15.6% in 1998, but otherwise ranged between 0.9% and 8.4%
- Cumulative growth of 104% (479,000 jobs)

#### Seasonally Adjusted Employment In California Construction Industry (Thousands in December)

Year	Total
1993	460.9
1994	488.2
1995	513.1
1996	525.1
1997	569.0
1998	657.6
1999	711.7
2000	765.5
2001	772.6
2002	781.3
2003	818.1
2004	870.1
2005	940.1

Source: Bureau of Labor Statistics, U.S. Department of Labor











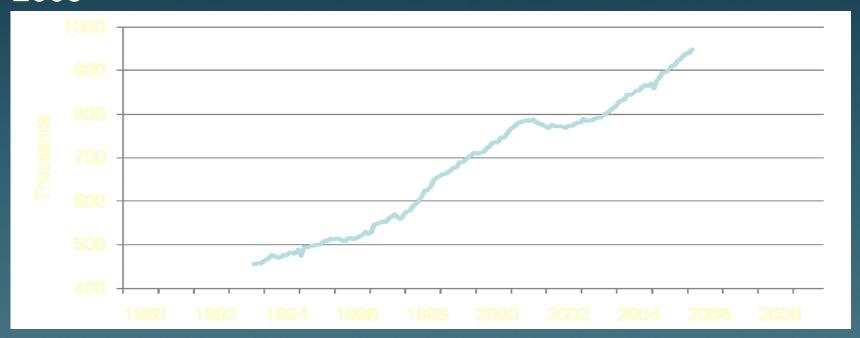








# **Employment in California Construction Industry 1993- 2005**



Source: Bureau of Labor Statistics, U.S. Department of Labor



















### **2000 Emissions Inventory for NOx**

- Based on available data, OFFROAD model estimated 419 tons per day (tpd) in 2000
- OFFROAD model then projected steadily declining rate of emissions through 2025
- Down 22.4% (to 325 tpd) by 2009
- Down anywhere from 4.3% to 8% per year from 2010 to 2025
- Down a cumulative total of 68.2% (to 103.2 tpd) between 2009 and 2025

NOx Emissions			
From Regulated Fleets			
(Tons Per Day)			
	2000		

	2000
Year	Inventory
2009	325.0
2010	311.0
2011	294.6
2012	278.6
2013	262.8
2014	246.0
2015	227.5
2016	209.9
2017	193.3
2018	177.8
2019	164.0
2020	150.8
2021	139.6
2022	128.8
2023	119.3
2024	110.7
2025	103.2











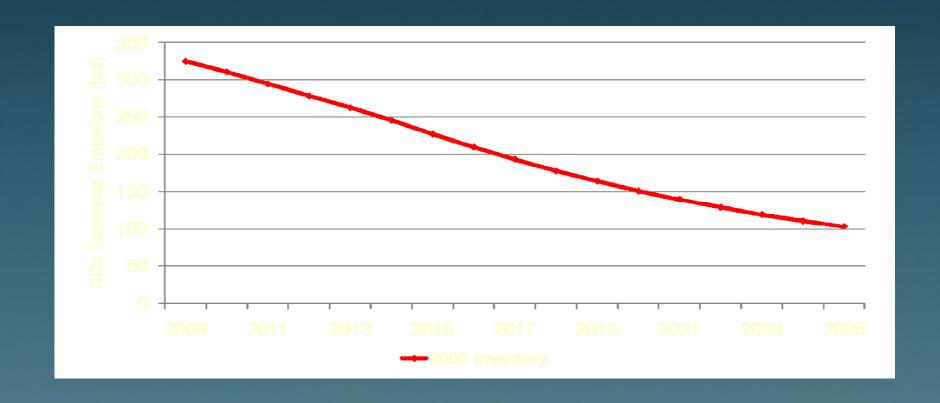








## **2000 Emissions Inventory for NOx**





















### **2000 Emissions Inventory for PM**

- Based on available data, OFFROAD model estimated 25 tpd in 2000
- OFFROAD model then projected steadily declining rate of emissions through 2025
- Down 30% (to 17.5 tpd) by 2009
- Down anywhere from 4.6% to 10.2% per year though 2025
- Down a cumulative total of 76% (to 4.2 tpd) between 2009 and 2025

PM Emissions			
From Regulated Fleets			
(Tons Per Day)			

(Tolis Fel Day)			
	2000		
Year	Inventory		
2009	17.49		
2010	16.69		
2011	15.86		
2012	14.82		
2013	13.71		
2014	12.65		
2015	11.54		
2016	10.48		
2017	9.53		
2018	8.56		
2019	7.71		
2020	6.98		
2021	6.29		
2022	5.69		
2023	5.14		
2024	4.64		
2025	4.17		











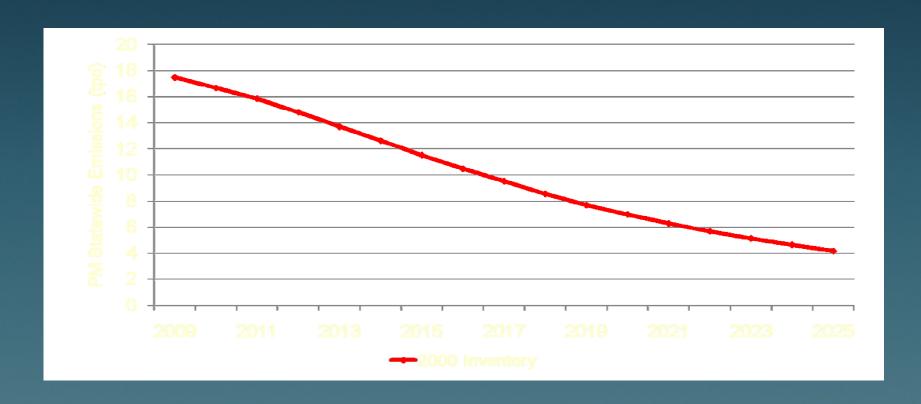








## **2000 Emissions Inventory for PM**





















- New regulation's reporting requirements took effect between April and August of 2009
- Opportunity to take fresh look at emissions inventory
- Embedded in DOORS data are 2009 values for three key inputs
- Total Population of Equipment (Each type)
- Age Distribution of Equipment (Each Type)
- Horsepower Distribution (Each Type)



















- As did CARB, AGC relied on OFFROAD model
- No modifications or adjustments
- AGC merely substituted DOORS data provided on September 26, 2009
- OFFROAD model estimates for 2009
- OFFROAD model projections for future years



















- The Economic Context
- Three years of sharp decline in real GDP originating in construction
- Erased all gains made in the preceding 12 years
- Construction industry contracted 4.5%, 14.5% and 12.2% in 2006, 2007 and 2008, respectively
- Cumulative drop of 28.4% (15.5B) in real GDP from 2005 to 2008

Real GDP			
Originating in California			
<b>Construction Industry</b>			
(\$ Millions)			

(\$ IVIIIIO115)			
Year	SIC	NAICS	
1993	36,704		
1994	38,414		
1995	38,270		
1996	38,880		
1997	41,925	43,751	
1998		47,107	
1999		49,672	
2000		51,716	
2001		53,178	
2002		52,009	
2003		51,695	
2004		54,125	
2005		54,747	
2006		52,282	
2007		44,668	
2008		39,208	

Source: Bureau of Economic Analysis, U.S. Department of Commerce











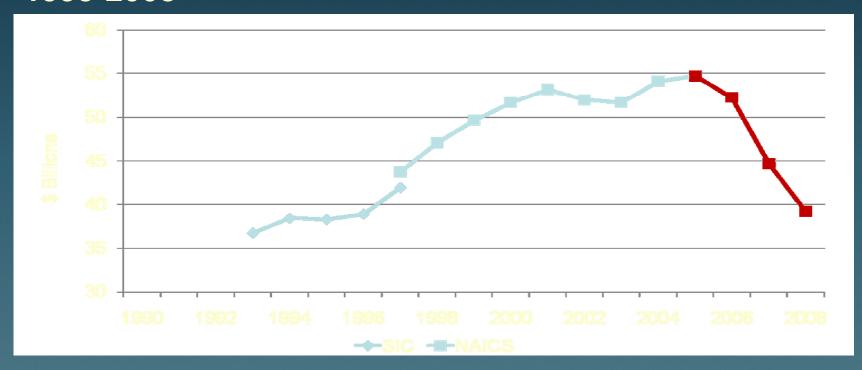








# Real GDP Originating in California Construction Industry 1993-2008



Source: Bureau of Economic Analysis, U.S. Department of Commerce



















- The Economic Context
- Four years of sharp decline in employment in construction
- Erased all gains made in the preceding 12 years
- Employment dropped 2.8%, 6.3%, 15.6% and 15% in 2006, 2007, 2008 and 2009 respectively
- Construction industry lost a cumulative total of 34.7% (326,000 jobs) from 2005 to 2009

#### Seasonally Adjusted Employment In California Construction Industry (Thousands in December)

(Theadanae in December)			
Year	Total		
1993	460.9		
1994	488.2		
1995	513.1		
1996	525.1		
1997	569.0		
1998	657.6		
1999	711.7		
2000	765.5		
2001	772.6		
2002	781.3		
2003	818.1		
2004	870.1		
2005	940.1		
2006	913.9		
2007	856.4		
2008	722.6		
2009*	614.1		

Preliminary for October 2009
 Source: Bureau of Labor Statistics, U.S. Department of Labor











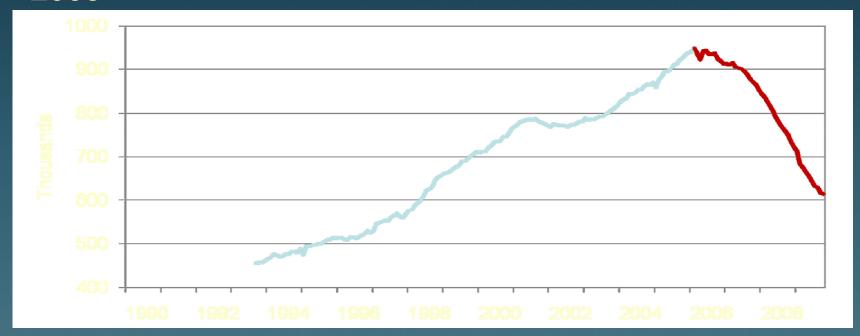








# **Employment in California Construction Industry 1993- 2008**



Source: Bureau of Labor Statistics, U.S. Department of Labor



















### **2009 Emissions Inventory for NOx**

- Based on DOORS data, OFFROAD model estimates 239.1 tpd in 2009
- OFFROAD model then projects steadily declining rate of emissions through 2025
- Down anywhere from 5.2% to 8.3% per year through 2025
- Down a cumulative total of 70% (to 71.6 tpd) between 2009 and 2025

NOx Emissions		
	gulated Fleets	
(Tons	Per Day)	
	2009	
Year	Inventory	
2009	239.1	
2010	222.5	
2011	210.9	
2012	199.9	
2013	189.3	
2014	177.1	
2015	163.9	
2016	151.5	
2017	139.5	
2018	128.1	
2019	117.6	
2020	108.0	
2021	99.3	
2022	91.1	
2023	83.5	
2024	77.1	
2025	71.6	











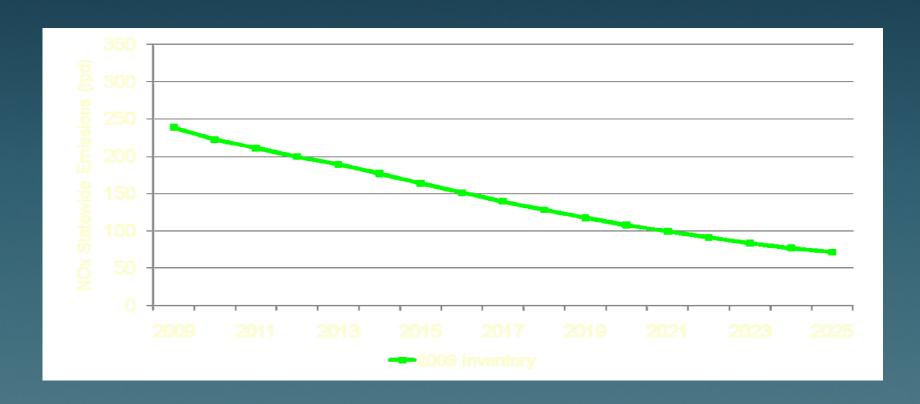








## **2009 Emissions Inventory for NOx**





















### **2009 Emissions Inventory for PM**

- Based on DOORS data, OFFROAD model estimates 12.9 tpd in 2009
- OFFROAD model then projects steadily declining rate of emissions through 2025
- Down anywhere from 5.3% to 12% through the year 2025
- Down a cumulative total of 79% (to 2.7 tpd) between 2009 and 2025

PM Emissions		
From Reg	gulated Fleets	
(Tons	s Per Day)	
	2009	
Year	Inventory	
2009	12.91	
2010	11.99	
2011	11.35	
2012	10.61	
2013	9.85	
2014	9.08	
2015	8.32	
2016	7.59	
2017	6.87	
2018	6.17	
2019	5.53	
2020	4.94	
2021	4.41	
2022	3.91	
2023	3.44	
2024	3.04	
2025 2.71		











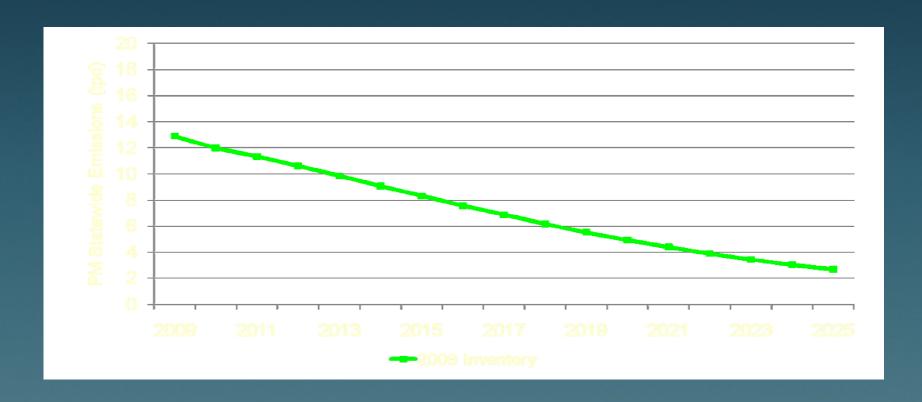








## **2009 Emissions Inventory for PM**





















- Originally projected decline in rate of emissions in each year between 2009 and 2025 on the low side but not terribly wide of the mark
- Originally projected to drop 4.3% to 8% in each year from 2009 to 2025
- Now projected to drop 5.2% to 8.3% drop in each of these years

	2000	2009	
Year	Inventory	Inventory	Delta
2009	325.0	239.1	-85.9
2010	311.0	222.5	-88.5
2011	294.6	210.9	-83.7
2012	278.6	199.9	-78.7
2013	262.8	189.3	-73.5
2014	246.0	177.1	-68.9
2015	227.5	163.9	-63.6
2016	209.9	151.5	-58.4
2017	193.3	139.5	-53.8
2018	177.8	128.1	-49.7
2019	164.0	117.6	-46.4
2020	150.8	108.0	-42.9
2021	139.6	99.3	-40.3
2022	128.8	91.1	-37.7
2023	119.3	83.5	-35.8
2024	110.7	77.1	-33.6
2025	103.2	71.6	-31.6



















- Originally projected decline in rate of emissions over entire period on the low side, but again, pretty close to the mark
- Originally projected to drop cumulative total of 68.3%
- Now projected to drop cumulative total of 70%

	2000	2009	
Year	Inventory	Inventory	Delta
2009	325.0	239.1	-85.9
2010	311.0	222.5	-88.5
2011	294.6	210.9	-83.7
2012	278.6	199.9	-78.7
2013	262.8	189.3	-73.5
2014	246.0	177.1	-68.9
2015	227.5	163.9	-63.6
2016	209.9	151.5	-58.4
2017	193.3	139.5	-53.8
2018	177.8	128.1	-49.7
2019	164.0	117.6	-46.4
2020	150.8	108.0	-42.9
2021	139.6	99.3	-40.3
2022	128.8	91.1	-37.7
2023	119.3	83.5	-35.8
2024	110.7	77.1	-33.6
2025	103.2	71.6	-31.6



















- Originally projected decline in rate of emissions between 2000 and 2009 quite wide of the mark
- Originally projected to drop 22.4% (from 419 tpd to 325 tpd) over these nine years
- Actually dropped 42.9% (from 419 tpd to 239.1 tpd) during this period
- 2000 inventory overstated rate of emissions in 2009 by 35.9% (85.9 tpd)

	2000	2009	
Year	Inventory	Inventory	Delta
2009	325.0	239.1	-85.9
2010	311.0	222.5	-88.5
2011	294.6	210.9	-83.7
2012	278.6	199.9	-78.7
2013	262.8	189.3	-73.5
2014	246.0	177.1	-68.9
2015	227.5	163.9	-63.6
2016	209.9	151.5	-58.4
2017	193.3	139.5	-53.8
2018	177.8	128.1	-49.7
2019	164.0	117.6	-46.4
2020	150.8	108.0	-42.9
2021	139.6	99.3	-40.3
2022	128.8	91.1	-37.7
2023	119.3	83.5	-35.8
2024	110.7	77.1	-33.6
2025	103.2	71.6	-31.6



















- 2000 inventory also overstated rate of emissions in each year between 2010 and 2025, and cumulative total of emissions over same period
  - Overstated rate of emissions by 35.9% to 44.1%
  - Overstated cumulative total of emissions by 39.4% (355,000 tons)

	2000	2009	
Year	Inventory	Inventory	Delta
2009	325.0	239.1	-85.9
2010	311.0	222.5	-88.5
2011	294.6	210.9	-83.7
2012	278.6	199.9	-78.7
2013	262.8	189.3	-73.5
2014	246.0	177.1	-68.9
2015	227.5	163.9	-63.6
2016	209.9	151.5	-58.4
2017	193.3	139.5	-53.8
2018	177.8	128.1	-49.7
2019	164.0	117.6	-46.4
2020	150.8	108.0	-42.9
2021	139.6	99.3	-40.3
2022	128.8	91.1	-37.7
2023	119.3	83.5	-35.8
2024	110.7	77.1	-33.6
2025	103.2	71.6	-31.6











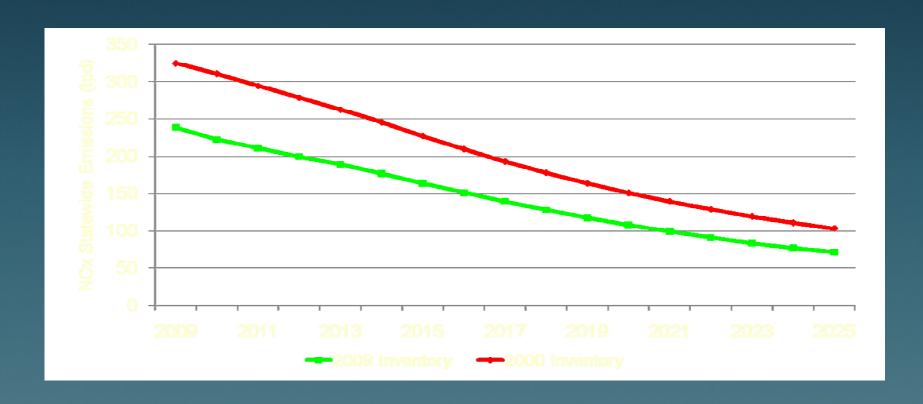








## **Comparison of Inventories for NOx**





















- Originally projected decline in rate of emissions in each year between 2009 and 2025 on the low side but not terribly wide of the mark
- Originally projected to drop 4.6% to 10.2% in each year from 2009 to 2025
- Now projected to drop 5.3% to 12% in each of these years

	2000	2009	
Year	Inventory	Inventory	Delta
2009	17.49	12.91	-4.58
2010	16.69	11.99	-4.71
2011	15.86	11.35	-4.51
2012	14.82	10.61	-4.21
2013	13.71	9.85	-3.86
2014	12.65	9.08	-3.57
2015	11.54	8.32	-3.22
2016	10.48	7.59	-2.89
2017	9.53	6.87	-2.66
2018	8.56	6.17	-2.38
2019	7.71	5.53	-2.19
2020	6.98	4.94	-2.04
2021	6.29	4.41	-1.88
2022	5.69	3.91	-1.78
2023	5.14	3.44	-1.70
2024	4.64	3.04	-1.60
2025	4.17	2.71	-1.46



















- Originally projected decline in rate of emissions over entire period on the low side, but again, pretty close to the mark
- Originally projected to drop cumulative total of 76%
- Now projected emissions to drop cumulative total of 79%

	2000	2009	
Year	Inventory	Inventory	Delta
2009	17.49	12.91	-4.58
2010	16.69	11.99	-4.71
2011	15.86	11.35	-4.51
2012	14.82	10.61	-4.21
2013	13.71	9.85	-3.86
2014	12.65	9.08	-3.57
2015	11.54	8.32	-3.22
2016	10.48	7.59	-2.89
2017	9.53	6.87	-2.66
2018	8.56	6.17	-2.38
2019	7.71	5.53	-2.19
2020	6.98	4.94	-2.04
2021	6.29	4.41	-1.88
2022	5.69	3.91	-1.78
2023	5.14	3.44	-1.70
2024	4.64	3.04	-1.60
2025	4.17	2.71	-1.46



















- Originally projected decline in rate of emissions between 2000 and 2009 quite wide of the mark
- Originally projected to drop 30% (from 25 tpd to 17.5 tpd) over these nine years
- Actually dropped 48.3% (from 25 tpd to 12.9 tpd) during this period
- 2000 inventory overstated rate of emissions in 2009 by 35.7% (4.6 tpd)

Year	2000 Inventory	2009 Inventory	Delta
2009	17.49	12.91	-4.58
2010	16.69	11.99	-4.71
2011	15.86	11.35	-4.51
2012	14.82	10.61	-4.21
2013	13.71	9.85	-3.86
2014	12.65	9.08	-3.57
2015	11.54	8.32	-3.22
2016	10.48	7.59	-2.89
2017	9.53	6.87	-2.66
2018	8.56	6.17	-2.38
2019	7.71	5.53	-2.19
2020	6.98	4.94	-2.04
2021	6.29	4.41	-1.88
2022	5.69	3.91	-1.78
2023	5.14	3.44	-1.70
2024	4.64	3.04	-1.60
2025	4.17	2.71	-1.46



















- 2000 inventory overstated rate of emissions in each year between 2010 and 2025, and cumulative total of emissions over same period
- Overstated rate of emissions by 35.5% to 53.9%
- Overstated cumulative total of emissions by 40.1% (nearly 18,000 tons).

	2000	2009	
Year	Inventory	Inventory	Delta
2009	17.49	12.91	-4.58
2010	16.69	11.99	-4.71
2011	15.86	11.35	-4.51
2012	14.82	10.61	-4.21
2013	13.71	9.85	-3.86
2014	12.65	9.08	-3.57
2015	11.54	8.32	-3.22
2016	10.48	7.59	-2.89
2017	9.53	6.87	-2.66
2018	8.56	6.17	-2.38
2019	7.71	5.53	-2.19
2020	6.98	4.94	-2.04
2021	6.29	4.41	-1.88
2022	5.69	3.91	-1.78
2023	5.14	3.44	-1.70
2024	4.64	3.04	-1.60
2025	4.17	2.71	-1.46











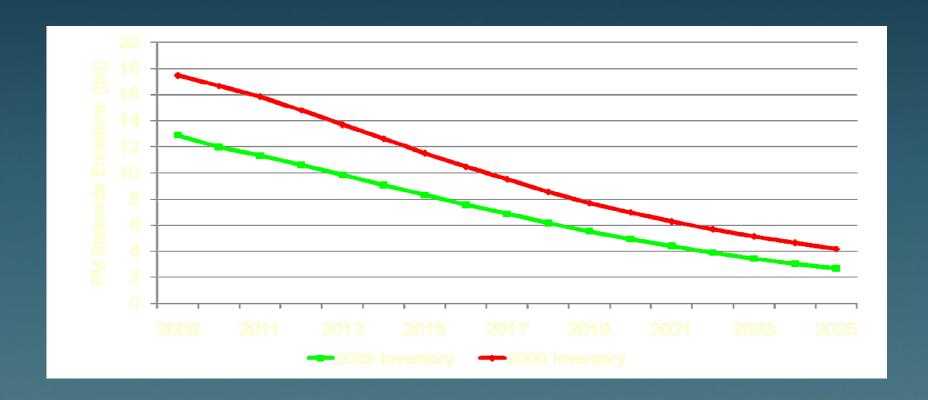








## **Comparison of Inventories for PM**





















- Legal implications
- Necessary and cost effective?
- Anticipated future emissions?
- Potential adverse health effects?
- Economic feasibility?
- Less costly alternatives that would achieve the same increments of environmental protection within the same timeframe?



















The ISOR (in April of 2007):

"Between 2007 and 2009, construction valuation is expected to increase over 10 billion dollars . . . ."

The best evidence currently available:

By the end of 2008, real GDP originating in California's construction industry had already dropped \$13B from its peak in 2006.



















The ISOR (in April of 2007):

"[T]he California construction industry is expected to add about 8,000 jobs per year from 2006 to 2014."

The best evidence currently available:

At the end of October of 2009, seasonally adjusted employment in the California construction industry was down to its lowest level since June of 1998. It had dropped for 31 consecutive months. The industry had lost 326,000 jobs, or 34.7 percent of its total workforce.



















The ISOR (in April of 2007):

"Staff expects many affected businesses would pass through the regulation's costs to their customers. This could be achieved, for example, through higher bids for construction projects . . . ."

The best evidence currently available:

The cost of construction is down. Competition is fierce, and in most cases, bids are significantly lower than owners expected two years ago. According to the U.S. Bureau of Labor Statistics, the cost of construction across the country dropped 7.4% from August of 2008 to August of 2009.



















- Core policy questions
- How driven by the data?
- Opportunities that it presents?
- How to stay the course and still reduce the economic burden on a devastated industry?



















## **Original Target for NOx**

- Regulation calibrated to drop rate of NOx emissions well below originally expected levels
- Down to 323.3 tpd in 2009
- Down anywhere from 6.0% to 14.9% per year in each of next 14 years
- Down to 83.6 tpd in 2023 and subsequent years
- Down a cumulative total of 73.2% (to 83.6 tpd) between 2009 and 2025

(Tolis I of Day)			
Year	Original Target		
2009	323.3		
2010	298.4		
2011	273.3		
2012	253.6		
2013	236.9		
2014	218.8		
2015	198.0		
2016	179.8		
2017	162.5		
2018	140.7		
2019	119.7		
2020	102.9		
2021	95.5		
2022	89.7		
2023	83.6		
2024	83.6		
2025	83.6		











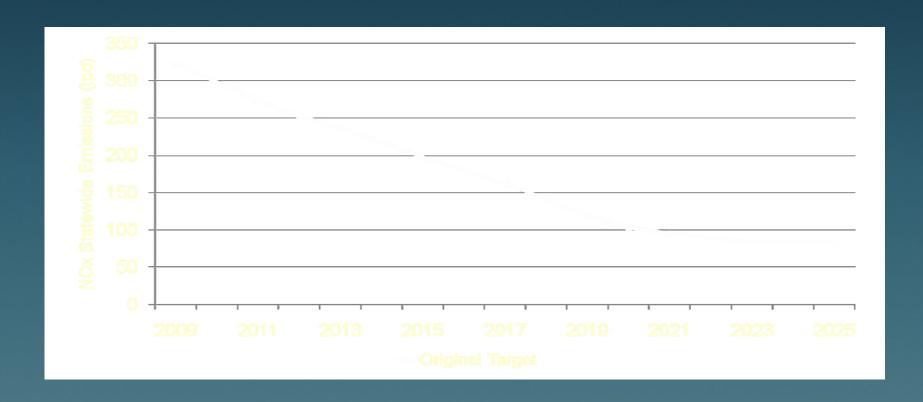








## **Original Target for NOx**





















## **Original Target for PM**

- Regulation calibrated to drop rate of PM emissions well below originally expected levels
- Down to 17.34 tpd in 2009
- Down anywhere from 6.6% to 37.3% per year in each of next 12 years
- Down to a low of 1.26 tpd in 2021
- Down a cumulative total of 92.4% (to 1.3 tpd) between 2009 and 2025

(Tolla I of Day)		
Year	Original Target	
2009	17.34	
2010	14.35	
2011	11.69	
2012	8.62	
2013	7.21	
2014	5.84	
2015	4.60	
2016	3.83	
2017	3.34	
2018	3.09	
2019	2.89	
2020	1.81	
2021	1.26	
2022	1.28	
2023	1.29	
2024	1.30	
2025	1.31	



















## **Original Target for PM**





















## **How 2009 Inventory for NOx Compares with Original Target**

- 2009 projections lower than targeted rates in 14 of 17 years between 2009 and 2025, including first 11 years
- Rate of emissions anywhere from 0.1% to 26% lower, but at least 14% lower in 10 of those 14 years

NOx Emissions From Regulated Fleets				
	(Tons Per Day)			
Original 2009				
Year	Target	Inventory	Delta	
2009	323.3	239.1	-84.2	
2010	298.4	222.5	-75.9	
2011	273.3	210.9	-62.4	
2012	253.6	199.9	-53.7	
2013	236.9	189.3	-47.6	
2014	218.8	177.1	-41.7	
2015	198.0	163.9	-34.1	
2016	179.8	151.5	-28.3	
2017	162.5	139.5	-23.0	
2018	140.7	128.1	-12.6	
2019	119.7	117.6	-2.1	
2020	102.9	108.0	5.1	
2021	95.5	99.3	3.8	
2022	89.7	91.1	1.4	
2023	83.6	83.5	-0.1	
2024	83.6	77.1	-6.5	
2025	83.6	71.6	-12.0	



















## **How 2009 Inventory for NOx Compares with Original Target**

- 2009 projections higher than targeted rates in only three years
- 2020 through 2022

NOx Emissions From Regulated Fleets				
(Tons Per Day)				
	Original	2009		
Year	Target	Inventory	Delta	
2009	323.3	239.1	-84.2	
2010	298.4	222.5	-75.9	
2011	273.3	210.9	-62.4	
2012	253.6	199.9	-53.7	
2013	236.9	189.3	-47.6	
2014	218.8	177.1	-41.7	
2015	198.0	163.9	-34.1	
2016	179.8	151.5	-28.3	
2017	162.5	139.5	-23.0	
2018	140.7	128.1	-12.6	
2019	119.7	117.6	-2.1	
2020	102.9	108.0	5.1	
2021	95.5	99.3	3.8	
2022	89.7	91.1	1.4	
2023	83.6	83.5	-0.1	
2024	83.6	77.1	-6.5	
2025	83.6	71.6	-12.0	



















## **How 2009 Inventory for NOx Compares with Original Target**

- Reductions still needed to meet targeted rates for those years are small fraction of reductions originally thought necessary
- Between 3.6% and 10.6%

NOx Emissions from Regulated Fleets				
	(Tons Per Day)			
Reductions Reductions Originally Still Year Needed Needed				
2009	-1.7	0.0		
2010	-1. <i>7</i> -12.6	0.0		
2010	-12.0 -21.4	0.0		
2011	-21.4 -25.0	0.0		
2012	-25.8	0.0		
2013	-23.0 -27.2	0.0		
2015	-27.2	0.0		
2016	-30.0	0.0		
2017	-30.8	0.0		
2018	-37.2	0.0		
2019	-44.3	0.0		
2020	-48.0	-5.1		
2021	-44.1	-3.9		
2022	-39.1	-1.4		
2023	-35.7	0.0		
2024	-27.1	0.0		
2025	-19.6	0.0		











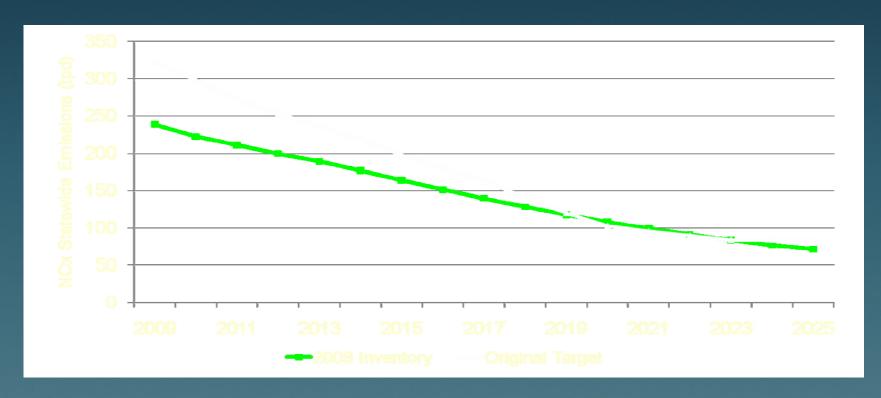








## **How 2009 Inventory for NOx Compares with Original Target**













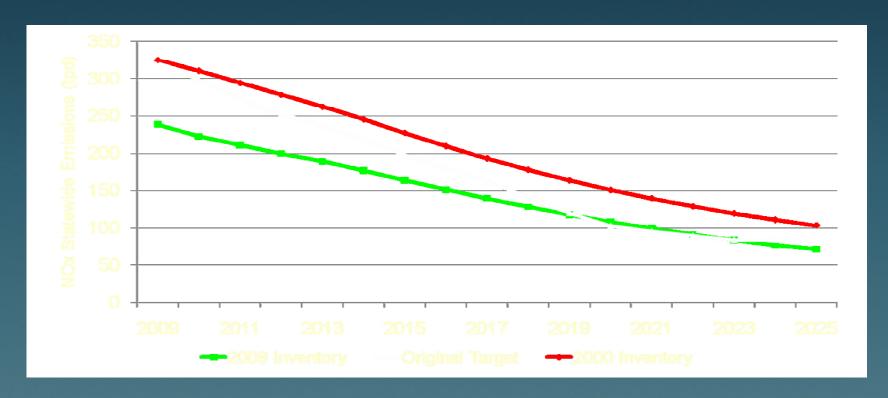








## **How 2009 Inventory for NOx Compares with 2000 Inventory and Original Target**





















- 2009 projections lower than targeted total of cumulative emissions in each and every year and in the aggregate
- 16.1% (173,000 tons) below targeted total by 2025

#### Cumulative NOx Emissions From Regulated Fleets (Thousands of Tons)

	Original	2009	
Year	Target	Inventory	Delta
2009	118.0	87.3	-30.7
2010	226.9	168.5	-58.4
2011	326.7	245.5	-81.2
2012	419.2	318.4	-100.8
2013	505.7	387.5	-118.2
2014	585.6	452.1	-133.5
2015	657.9	512.0	-145.9
2016	723.5	567.3	-156.2
2017	782.8	618.2	-164.6
2018	834.1	665.0	-169.1
2019	877.9	707.9	-170.0
2020	915.4	747.3	-168.1
2021	950.3	783.6	-166.7
2022	983.0	816.8	-166.2
2023	1,013.5	847.3	-166.2
2024	1,044.0	875.4	-168.6
2025	1,074.6	901.6	-173.0



















 Literally nothing needed to achieve targeted total of cumulative emissions for NOx

#### Cumulative NOx Emissions From Regulated Fleets (Cumulative Thousands of Tons)

Year	Reductions Originally Needed	Reductions Still Needed
2009	-0.6	0.0
2010	-5.2	0.0
2011	-13.0	0.0
2012	-22.2	0.0
2013	-31.6	0.0
2014	-41.5	0.0
2015	-52.3	0.0
2016	-63.3	0.0
2017	-74.5	0.0
2018	-88.1	0.0
2019	-104.2	0.0
2020	-121.7	0.0
2021	-137.8	0.0
2022	-152.1	0.0
2023	-165.2	0.0
2024	-175.1	0.0
2025	-182.2	0.0









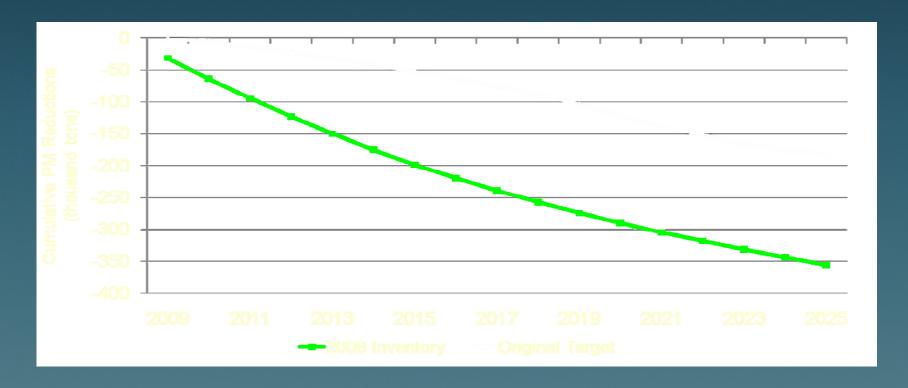






























## **How 2009 Inventory for PM Compares with Original Target**

- 2009 projections lower than targeted rate for first three years
- 25.4% lower in 2009
- 16.7% lower in 2010
- 2.9% lower in 2011

PM Emissions From Regulated Fleets			
	(Tons P	er Day)	
	Original	2009	
Year	Target	Inventory	Delta
2009	17.30	12.90	-4.40
2010	14.40	12.00	-2.40
2011	11.69	11.35	-0.34
2012	8.62	10.61	1.99
2013	7.21	9.85	2.64
2014	5.84	9.08	3.24
2015	4.60	8.32	3.72
2016	3.83	7.59	3.75
2017	3.34	6.87	3.53

6.17

5.53

4.94

4.41

3.91

3.44

3.04

2.71

3.09

2.89

1.81

1.26

1.28

1.29

1.30

1.31













2018

2019

2020

2021

2022

2023

2024

2025





3.09

2.64

3.13

3.15

2.63

2.151.74

1.40



## **How 2009 Inventory for PM Compares with Original Target**

• 2009 projections still higher than targeted rates for subsequent years

PM Emissions From Regulated Fleets			
(Tons Per Day)			
	Original	2009	
Year	Target	Inventory	Delta
2009	17.30	12.90	-4.40
2010	14.40	12.00	-2.40
2011	11.69	11.35	-0.34
2012	8.62	10.61	1.99
2013	7.21	9.85	2.64
2014	5.84	9.08	3.24
2015	4.60	8.32	3.72
2016	3.83	7.59	3.75
2017	3.34	6.87	3.53
2018	3.09	6.17	3.09
2019	2.89	5.53	2.64
2020	1.81	4.94	3.13
2021	1.26	4.41	3.15
2022	1.28	3.91	2.63
2023	1.29	3.44	2.15
2024	1.30	3.04	1.74
2025	1.31	2.71	1.40



















## How 2009 Inventory for PM Compares with Original Target

- But again, reductions needed to meet targeted rates are just a fraction of reductions originally thought necessary
- Less than half in 4 of these years
- Just over half (between 50% and 60%) in 8 of these years
- Closer to two-thirds (but never more than 63%) in only 2 of these years

#### Reductions in PM Emissions From Regulated Fleets (Tons Per Day)

(Tons Per Day)		
Year	Reductions Originally Needed	Reductions Still Needed
2009	-0.15	0.00
2010	-2.34	0.00
2011	-4.17	0.00
2012	-6.20	-1.99
2013	-6.50	-2.64
2014	-6.81	-3.24
2015	-6.94	-3.72
2016	-6.64	-3.75
2017	-6.20	-3.53
2018	-5.47	-3.09
2019	-4.83	-2.64
2020	-5.22	-3.13
2021	-5.03	-3.15
2022	-4.41	-2.63
2023	-3.85	-2.15
2024	-3.34	-1.74
2025	-2.86	-1.40











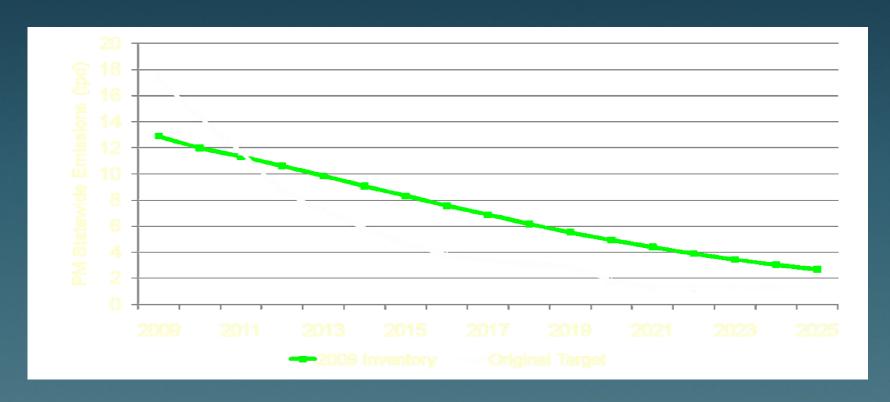








## **How 2009 Inventory for PM Compares with Original Target**













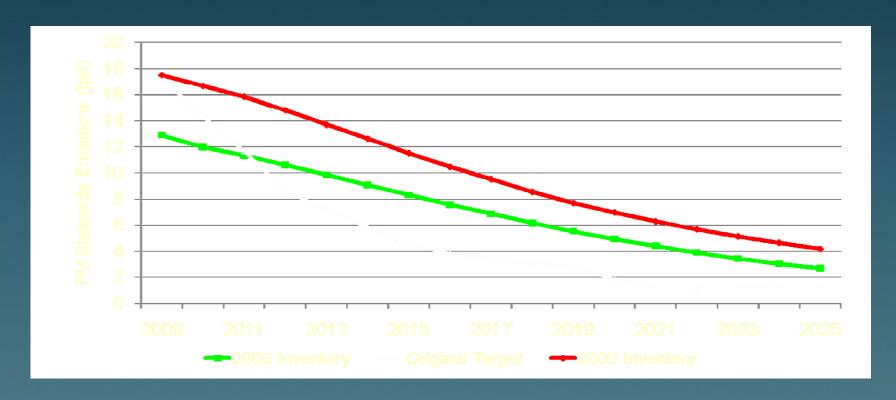








## **How 2009 Inventory for PM Compares with 2000 Inventory and Original Target**





















- 2009 projections lower than targeted total of cumulative emissions through 2013
- 25.6% lower in 2009
- 21.4% lower in 2010
- 16.5% lower in 2011
- 9.9% lower in 2012
- Still 4.2% lower in 2013

### PM Emissions from Regulated Fleets (Cumulative Thousands of Tons)

	Original	2009	
Year	Target	Inventory	Delta
2009	6.33	4.71	-1.62
2010	11.57	9.09	-2.48
2011	15.84	13.23	-2.61
2012	18.98	17.10	-1.88
2013	21.61	20.70	-0.91
2014	23.75	24.01	0.26
2015	25.42	27.05	1.63
2016	26.82	29.82	3.00
2017	28.04	32.33	4.29
2018	29.17	34.58	5.41
2019	30.22	36.60	6.38
2020	30.88	38.40	7.52
2021	31.34	40.01	8.67
2022	31.81	41.43	9.62
2023	32.28	42.70	10.42
2024	32.75	43.80	11.05
2025	33.23	44.79	11.56



















 2009 projections higher than targeted total of cumulative emissions in subsequent years

PM Emissions from Regulated Fleets
(Cumulative Thousands of Tons)

	Original	2009	
Year	Target	Inventory	Delta
2009	6.33	4.71	-1.62
2010	11.57	9.09	-2.48
2011	15.84	13.23	-2.61
2012	18.98	17.10	-1.88
2013	21.61	20.70	-0.91
2014	23.75	24.01	0.26
2015	25.42	27.05	1.63
2016	26.82	29.82	3.00
2017	28.04	32.33	4.29
2018	29.17	34.58	5.41
2019	30.22	36.60	6.38
2020	30.88	38.40	7.52
2021	31.34	40.01	8.67
2022	31.81	41.43	9.62
2023	32.28	42.70	10.42
2024	32.75	43.80	11.05
2025	33.23	44.79	11.56



















- But again, reductions still needed to meet original targets are just a fraction of reductions originally thought necessary
- Less than 3% needed to reach original target in 2014
- Less than one-third needed in each of next five years (through 2019)
- Significantly less than half (below 40%) needed in each of the remaining years

### PM Emissions From Regulated Fleets (Cumulative Thousands of Tons)

	Reductions	Reductions Still
Year	Originally Needed	Needed
2009	-0.05	0.00
2010	-0.91	0.00
2011	-2.43	0.00
2012	-4.70	0.00
2013	-7.07	0.00
2014	-9.55	-0.27
2015	-12.09	-1.63
2016	-14.51	-3.00
2017	-16.77	-4.29
2018	-18.77	-5.41
2019	-20.53	-6.38
2020	-22.42	-7.52
2021	-24.26	-8.67
2022	-25.87	-9.63
2023	-27.27	-10.41
2024	-24.49	-11.05
2025	-29.53	-11.57









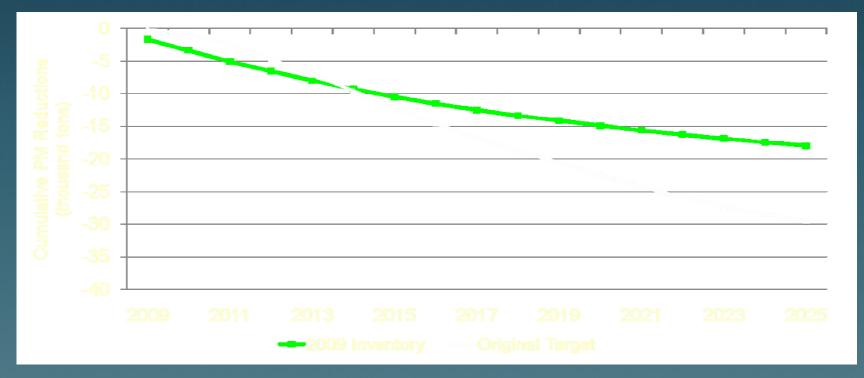






























## A Final Note on the Outlook for the Construction Industry . . .

- tends to lag behind the rest of the economy
- typically trails rest of economy both into and out of recession
- can take many years to recover from a serious downturn











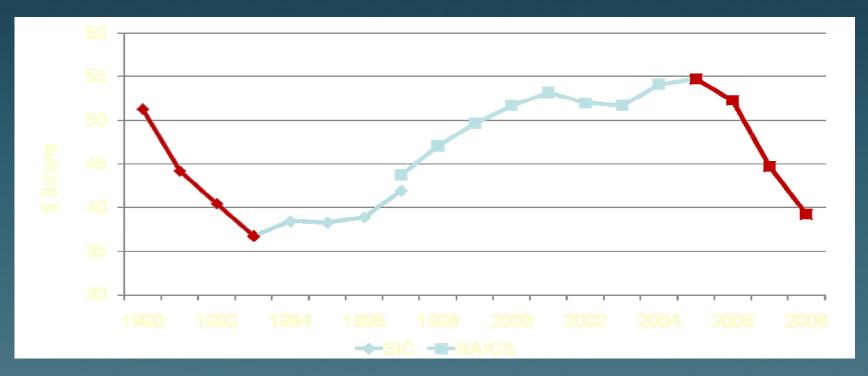








## Real GDP Originating in California Construction Industry 1990-2008



Source: Bureau of Economic Analysis, U.S. Department of Commerce



















## A Final Note on the Outlook for the Construction Industry . . .

- Current downturn in the California construction industry already worse than 1990 -1993
- Real GDP originating in California construction industry expected to fall again in 2009
- Well into fourth year of declining employment
- Still looking for the bottom



















## A Final Note on the Outlook for the Construction Industry . . .

- Significant impediments to recovery
- huge government deficits
- risk of a collapse in commercial mortgage market
- Business opportunities difficult to identify





























### Thank you.

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Direct: 703-837-5335 Email: kennedym@agc.org

### ENCLOSURE C

#### FORD L9000 CAMION DE VOLTEO PANAMA CITY, PAN, Feb 2, 2010



Closer Look

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#### New Search

#### Equipment Class > Construction - 99 Categories Found

#### View All (this list)

All Terrain Vehicle (37)

Articulated Dump Truck (64)

Broom (18)

Compaction - Compactor (20)

Compaction - Roller (63)

Compaction Tow Behind Roller (5)

Compaction - Vibratory Padfoot Compactor (31)

Compaction - Vibratory Smooth Drum Roller (85)

Compaction - Walk Behind Compactor (344)

Cranes - All Terrain Crane (1)

Cranes - Conventional Truck Crane (1)

Cranes - Crane (24)

Cranes - Crawler Crane (19)

Cranes - Hydraulic Truck Crane (25)

Cranes - Rough Terrain Crane (46)

Cranes - Tower Crane (3)

Crawler Loader (20)

Crawler Tractor (214)

Dumper (22)

Engine (67)

Equipment Attachment (770)

Excavators - Demolition Excavator (2)

Excavators - Hydraulic Excavator (268)

Excavators - Midi Excavator (43)

Excavators - Mini Excavator (79)

Excavators - Mobile Excavator (16)

Generator Sets - Heavy Generator Set (8)

Generator Sets - Industrial Generator Set (14)

Generator Sets - Light Generator Set (213)

Hydraulic Hammer (184)

Light Tower (79)

Loader Backhoe (144)

Miscellaneous - Construction (3)

Miscellaneous Industrial (333)

Miscellaneous - Shoo, Warehouse & Consumer (249)

Motor Grader (116)

Motor Scraper (61)

Parts or Stationary - Construction (62)

Pile Hammer & Extractor (1)

Pull Scraper (36)

Rock Truck (15)

Sewer and Water (17)

Shear (12)

Sign Board (18)

Skid Steer Attachment (2052)

Skid Steer Loader (220)

Skip Loader (41)

Snow Equipment (12)

Street Sweepers (31)

Survey Equipment (34)

Tandem Roller (69)

Trucks - Dump Truck (Quad/A) (27)

Trucks - Dump Truck (S/A) (30)

Trucks - Dump Truck (T/A) (101)

Trucks - Dump Truck (Tri/A) (53)

Trucks - Fuel & Lube Truck (31)

Trucks - Mechanics Truck (61)

Trucks - Water Truck (131)

Water Tower (12)

Water Wagon (28)

Welder (130)

Wheel Dozer (1)

Wheel Loader (245)

Aggregate - Aggregate Miscellaneous (14)

Aggregate - Control Van (9)

Aggregate - Conveyor (58)

Agriculture 2WD Tractor (85)

Agriculture - 4WD Tractor (68)

Agriculture - Belted Tractor (32)

Agriculture - Disc (45)

Agriculture - MFWD Tractor (193)

Agriculture - Utility Tractor (27)

Air Compressor (146)

Asphalt - Asphalt Paver (33)

Cable Plow (1)

Concrete - Concrete Miscellaneous (246)

Concrete - Concrete Paver (6)

Concrete - Concrete Pump (7)

Concrete - Concrete Pump Truck (7)

Drills - Drill (9)

Environmental Equipment (38)

Excavators - Material Handler (2)

Lifts - Forklift (241)

Lifts - Rough Terrain Forklift (22)

Lifts - Telescopic Forklift (213)

Miscellaneous - Equipment Part (305)

Mobile Structure (22)

Pipeline - Pipelayer (2)

Pipeline - Pipeline Miscellaneous (2)

Trailers - Jeep, Boosters & Dollies (40)

Trailers - Lowboy (57)

Trailers - Van Trailer (46)

Trencher (53)

Trucks - Flatbed Truck (146)

Trucks - Rollback Truck (4)

Trucks - Tank Truck (6)

Trucks - Transfer Set (17)

Trucks - Utility Truck (48)

Utility Equipment (3)

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New Search

Construction > All Terrain Vehicle - 8 Manufacturers Found

View All (this list)

AMERSPORTS (9)

EZ GO (2)

GO-TRACK (1)

KAWASAKI (6)

MOROOKA (6)

OTHER (2)

RUN MASTER (10)

TAYLOR-DUNN (1)

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**VOLVO A35C** 6X6 ARTICULATED DUMP TR... PHOENIX AZ Feb 2 3 2010



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New Search

Construction > Articulated Dump Truck - 6 Manufacturers Found View All (this list)

BELL (2) CATERPILLAR (34) JOHN DEERE (2) KOMATSU (5) TEREX (1)

**VOLVO (20)** 

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#### **BROCE RJ300** BROOM

ORLANDO, FL, Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Broom - 6 Manufacturers Found

View All (this list)

BROCE (9)

LAY-MOR (3)

LEE-BOY (1)

POWER BOSS (1)

ROSCO<sub>(3)</sub>

TERRAMITE (1)

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New Search

Construction > Compaction - Compactor - 5 Manufacturers Found

View All (this list)

BOMAG (1)

CATERPILLAR (16)

DRESSER (1)

JCB (1)

RAMMAX (1)

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#### **INGERSOLL-RAND PT125R** 9 WHEEL PNEUMATIC ROLLE... PHOENIX, AZ, Feb 2 - 3, 2010



Closer Look

Many auctions now have most major items available for live Internet bidding with rbauctionBid-Live. Check here for updated information on auctions & items available for live internet bidding.

New Search

Construction > Compaction - Roller - 20 Manufacturers Found

View All (this list)

BOMAG (6)

BROCE (1)

**BROS (1)** 

CATERPILLAR (5)

CLARK (1)

DYNAPAC (11)

FERGUSON (3)

HAMM (1)

HYPAC (2)

HYSTER (2)

INGERSOLL-RAND (5)

INGERSOLLRAND (3)

INGRAM (3)

KAWASAKI (3)

KOMATSU (1)

ROSCO(2)

**SAKAI (10)** 

TAMPO (1)

WATANABE (1)

YTO (1)

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**INGERSOLL-RAND SD100F** PROPAC VIBRATORY PADFOO.. ORLANDO, FL, Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Compaction - Vibratory Padfoot Compactor - 8 Manufacturers Found View All (this list)

BOMAG (2)

CASE (1)

CATERPILLAR (12)

DYNAPAC (4)

**HAMM** (1)

HYSTER (1)

INGERSOLL-RAND (9)

<u>TAMPO (1)</u>

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2006 CATERPILLAR CS563E VIBRATORY SMOOTH DRUM R. ORLANDO, FL, Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Compaction - Vibratory Smooth Drum Roller - 18 Manufacturers Found

View All (this list)

AMMANN (1)

**BOMAG (10)** 

CATERPILLAR (23)

DYNAPAC (9)

ESCORTS (1)

HAMM (4)

HYPAC (1)

HYSTER (1)

INGERSOLL-RAND (22)

JCB (1)

LEBRERO (1)

LEE-BOY (1)

**NEIL (1)** 

RAYGO (1)

**SANY (3)** 

STONE RHINO (1)

VIBRATON III (1)

YTO(3)

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**GROVE GMK3050** 50 TON 6X6 ALL TERRAIN ...



Closer Look

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New Search

Construction > Cranes - All Terrain Crane - 1 Manufacturers Found View All (this list)

GROVE (1)

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#### **GROVE AP206 6 TON CARRY DECK CRANE** ORI ANDO, FL, Feb 15 - 20, 2010



Closer Look

Many auctions now have most major items available for live Internet bidding with rbauctionBid-Live. Check here for updated information on auctions & items available for live internet bidding.

New Search

Construction > Cranes - Crane - 7 Manufacturers Found

View All (this list)

ACE (1)

**BRODERSON (12)** 

GROVE (4)

HANGZHOU NORIN (1)

HIAB\_(1)

RAMEY (1)

SHUTTLELIFT (4)

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**2007 FUSHAN QUY120** 120 TON SELF ERECTING C... LAS VEGAS, NV, Feb 5, 2010



Closer Look

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New Search

Construction > Cranes - Crawler Crane - 9 Manufacturers Found

View All (this list)

AICHI (1)

AMERICAN (1)

FUSHAN (2)

GROVE (1)

KOBELCO (6)

LINK-BELT (3)

MAEDA (2)

MANTIS (2)

MARION (1)

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### PETTIBONE 30 15 TON ROUGH TERRAIN CR... ORLANDO. FL. Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Cranes - Rough Terrain Crane - 12 Manufacturers Found

View All (this list)

BANTAM (1)

DRESSER (1)

GROVE (9)

KOBELCO (1)

KOMATSU (1)

LINK-BELT (4)

LORAIN (6)

ORMIG (1)

P&H(8)

PETTIBONE (2)

TADANO (3)

TEREX (9)

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2006 CATERPILLAR 963C CRAWLER LOADER ORLANDO, FL, Feb 15 20, 2010



Closer Look

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New Search

Construction > Crawler Loader - 4 Manufacturers Found

View All (this list)

CATERPILLAR (11)

FIATALLIS (2)

JOHN DEERE (6)

KOMATSU (1)

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2006 DRESSTA TD40E CRAWLER TRACTOR CHICAGO, IL. Mar 11 - 12, 2010



Closer Look

Many auctions now have most major items available for live Internet bidding with repauction Bid-Live. Check here for updated information on auctions & items available for live internet bidding.

**New Search** 

Construction > Crawler Tractor - 14 Manufacturers Found

View All (this list)

ALLIS-CHALMERS (1)

BEML (1)

CASE (5)

CATERPILLAR (128)

DRESSER (1)

DRESSTA (1)

FIATALLIS (3)

FURUKAWA (1)

HITACHI (1)

**INTERNATIONAL (1)** 

JOHN DEERE (40)

KOMATSU (22)

MITSUBISHI (8)

PENGPU SHANGHI (1)

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### 2002 BENFORD 3000DRA 4X4 DUMPER

MOERDIJK, NLD, Feb 24 - 26, 2010



Closer Look

Many auctions now have most major items available for live Internet bidding with rbauctionBid-Live. Check here for updated information on auctions & items available for live internet bidding.

New Search

Construction > Dumper - 7 Manufacturers Found

View All (this list)

BARFORD (1)

BENFORD (2)

FIORI (2)

LIFTON NEUSON (1)

MOROOKA (8)

THWAITES (5)

YANMAR (3)

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Many auctions now have most major items available for live Internet bidding with rbauctionBid-Live. Check here for updated information on auctions & items available for live internet bidding.

New Search

Construction > Excavators - Demolition Excavator - 1 Manufacturers Found View All (this list)

CATERPILLAR (2)

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CATERPILLAR 375LME HYDRAULIC EXCAVATOR PHOENIX AZ, Feb 2 - 3, 2010



Closer Look

Many auctions now have most major items available for live Internet bidding with rbauctionBid-Live. Check here for updated information on auctions & items available for live internet bidding.

New Search

Construction > Excavators - Hydraulic Excavator - 25 Manufacturers Found

View All (this list)

CASE (5)

CASE POCLAIN (2)

CATERPILLAR (111)

DAEWOO (7)

DOOSAN SOLAR (1)

FIAT-HITACHI (1)

HITACHI (22)

HYUNDAL (4)

INGERSOLL-RAND (1)

JCB (8)

JOHN DEERE (22)

KOBELCO (17)

KOMATSU (27)

L&T KOMATSU (6)

LANG TOOL (1)

LINK-BELT (4)

MITSUBISHI (3)

**NEW HOLLAND KOBELCO (1)** 

O&K (1)

**SANY (1)** 

TATA HITACHI (1)

TATA-HITACHI (2)

TEREX (1)

**VOLVO (18)** 

XCG (1)

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KOMATSU PC40MR-1 MIDI EXCAVATOR ORLANDO, FL. Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Excavators - Midi Excavator - 12 Manufacturers Found

View All (this list)

**CATERPILLAR (8)** 

HITACHI (6)

IHI (1)

INGERSOLL-RAND (2)

JCB (1)

JOHN DEERE (2)

KOBELCO (3)

KOMATSU (14)

LINK-BELT (1)

SUMITOMO (2)

TATA HITACHI (1)

YANMAR (2)

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### YANMAR RX302 MINI EXCAVATOR





Closer Look

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New Search

Construction > Excavators - Mini Excavator - 17 Manufacturers Found

View All (this list)

AIRMAN (1)

BOBCAT (8)

CASE (1)

CATERPILLAR (11)

DAEWOO (1)

DITCH WITCH (1)

HANIX (1)

HITACHI (5)

<u>IHI (1)</u>

KOBELCO (5)

KOMATSU (16)

KUBOTA (11)

TAKEUCHI (5)

THOMAS (1)

VERMEER (3)

VOLVO (1)

YANMAR (7)

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MITSUBISHI MS090WD MOBILE EXCAVATOR NARITA, JPN, Jan 27, 2010



Closer Look

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New Search

Construction > Excavators - Mobile Excavator - 9 Manufacturers Found

View All (this list)

CASE POCLAIN (1)

CATERPILLAR (3)

DROTT (1)

FIAT HITACHI (1)

HYUNDAI (4)

KOMATSU (2)

MASSEY FERGUSON (1)

MITSUBISHI (1)

0&K (2)

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FORD 555C LOADER BACKHOE ORLANDO, FL. Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Loader Backhoe - 14 Manufacturers Found

View All (this list)

BENFRA (1)

CASE (14)

CATERPILLAR (48)

FAI (1)

FORD (2)

INTERNATIONAL (1)

JCB (5)

JOHN DEERE (49)

KOMATSU (6)

KOMATSU FAI (1)

MASSEY FERGUSON (1)

**NEW HOLLAND (1)** 

**TEREX (13)** 

VOLVO (1)

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CATERPILLAR 140H VHP MOTOR GRADER PHOENIX, AZ, Feb 2 3, 2010



Closer Look

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New Search

Construction > Motor Grader - 18 Manufacturers Found

View All (this list)

ALLIS-CHALMERS (1)

**BEML (1)** 

CATERPILLAR (69)

CATERPILLAR-WRIGHT (2)

CHAMPION (2)

DRESSER (2)

FIAT (2)

FIATALLIS (1)

GALION (5)

JOHN DEERE (12)

KOMATSU (6)

LEE-BOY (3)

LW (1)

MAULDIN (1)

MITSUBISHI (1)

NORAM (2)

O&K (1)

SANY (4)

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Closer Look

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New Search

Construction > Motor Scraper - 3 Manufacturers Found

View All (this list)

CATERPILLAR (57)

JOHN DEERE (2)

TEREX (2)

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New Search

Construction > Pile Hammer & Extractor - 1 Manufacturers Found

View All (this list)

DELMAG (1)

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### **KOMATSU 210M** CAMION FUERA DE CARRETE... TORREON, MEX. Feb 10, 2010



Closer Look

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New Search

Construction > Rock Truck - 4 Manufacturers Found

View All (this list)

CATERPILLAR (11)

EUCLID (2)

KOMATSU (1)

TEREX (1)

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#### **BOBCAT 873** SKID STEER LOADER OLYMPIA, WA, Mar 4 - 5, 2010



Closer Look

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New Search

Construction > Skid Steer Loader - 24 Manufacturers Found

View All (this list)

ASV (9)

BOBCAT (55)

BRADCO (1)

CASE (6)

CATERPILLAR (41)

COMMANDER (1)

DITCH WITCH (2)

GEHL (1)

IPC (1)

JOHN DEERE (11)

KOMATSU (1)

MUSTANG (1)

**NEW HOLLAND (3)** 

**OWATONNA MUSTANG (1)** 

RACOON (4)

TAKEUCHI (1)

TEREX VECTRA (4)

THOMAS (66)

**TORO (1)** 

TOYOTA (2)

TRAK INTERNATIONAL (1)

VERMEER (2)

VOLVO (4)

VTS (1)

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2005 JOHN DEERE 210LE 4X4 LOADER LANDSCAPER ORLANDO, FL, Feb 15 - 20, 2010



Closer Look

Many auctions now have most major items available for live Internet bidding with rbauctionBid-Live. Check here for updated information on auctions & items available for live internet bidding.

**New Search** 

Construction > Skip Loader - 5 Manufacturers Found

View All (this list)

CASE (6)

CATERPILLAR (3)

JOHN DEERE (22)

MASSEY FERGUSON (1)

**NEW HOLLAND (9)** 

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2008 INGERSOLL-RAND DD90HF VIBRATORY TANDEM ROLLER ORLANDO, FL, Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Tandem Roller - 18 Manufacturers Found

View All (this list)

BITELLI (4)

BOMAG (5)

CATERPILLAR (10)

DRESSER (2)

DYNAPAC (2)

GALION (1)

HAMM (4)

HYPAC (1)

HYSTER (5)

INGERSOLL-RAND (25)

INGERSOLLRAND (2)

JCB (1)

LEE-BOY (1)

MAULDIN (1)

SAKAI (1)

STONE (1)

STONE WOLFPAC (1)

WACKER (2)

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CATERPILLAR D250D 5,000 GALLON 6X6 WATER ... ORLANDO, FL, Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Water Wagon - 4 Manufacturers Found

View All (this list)

CATERPILLAR (21)

JOHN DEERE (2)

TEREX (2)

VOLVO (3)

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**CATERPILLAR 824C** WHEEL DOZER S VEGAS, NV, Feb 5, 2010



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New Search

Construction > Wheel Dozer - 1 Manufacturers Found

View All (this list)

CATERPILLAR (1)

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2005 CATERPILLAR 966G SERIES II WHEEL LOADER ORLANDO, FL. Feb 15 - 20, 2010



Closer Look

Many auctions now have most major items available for live Internet bidding with rbauctionBid-Live. Check here for updated information on auctions & items available for live internet bidding.

New Search

Construction > Wheel Loader - 21 Manufacturers Found

View All (this list)

**CASE (5)** 

CATERPILLAR (120)

DAEWOO (3)

DOOSAN (1)

DRESSER (1)

FIATALLIS (1)

FURUKAWA (1)

HIDROMEK (1)

HITACHI (2)

HOUGH (1)

HYUNDAI (1)

JCB (1)

JOHN DEERE (21)

KAWASAKI (15)

KOBELCO (1)

KOMATSU (50)

KUBOTA (1)

NEW HOLLAND (1)

O&K (1)

VOLVO (15)

XGMA (2)

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### BLAW-KNOX BK450 CRAWLER ASPHALT PAVER

DUBAL ARE, Mar 1 - 3, 2010



Closer Look

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New Search

Construction > Asphalt - Asphalt Paver - 15 Manufacturers Found

View All (this list)

BARBER-GREENE (3)

BITELLI (2)

BLAW-KNOX (9)

CATERPILLAR (1)

CEDARAPIDS (3)

DYNAPAC (1)

FISHER (1)

**GEHL (1)** 

LEE-BOY (5)

MITSUBISHL(1)

MOD (1)

PROPAVER (1)

**SANY (1)** 

VION (1)

VOEGELE (2)

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#### KLR ITD-46 **CRAWLER DRILL** HYDERABAD, IND, Feb 3, 2010



Closer Look

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New Search

Construction > Drills - Drill - 8 Manufacturers Found

View All (this list)

ATLAS COPCO (1)

**FORD (1)** 

INGERSOLL RAND (2)

KLR (1)

SOOSAN (1)

TAMROCK (1)

TECNOTEST (1)

VERMEER (1)

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Many auctions now have most major items available for live Internet bidding with rbauctionBid-Live. Check here for updated information on auctions & items available for live internet bidding.

New Search

Construction > Excavators - Material Handler - 2 Manufacturers Found

View All (this list)

CATERPILLAR (1) LIEBHERR (1)

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#### TOYOTA 403FG20 2 TON FORKLIFT HYDERABAD, IND. Feb 3, 2010



Closer Look

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**New Search** 

Construction > Lifts - Forklift - 28 Manufacturers Found

View All (this list)

ACE (4)

**BLUE GIANT (1)** 

CATERPILLAR (74)

**CLARK (12)** 

CLARKE (1)

**DAEWOO (11)** 

EAGLE PICHER (1)

HELI (2)

HYSTER (18)

HYUNDAL(1)

KALMAR (3)

KOMATSU (25)

LINDE (6)

LION LIFTALL (1)

MANITOU (2)

MICHIGAN (1)

MITSUBISHI (32)

MOFFET (3)

MOFFETT MOUNTY (2)

NISSAN (10)

PATRICK (1)

PRINCETON (2)

STARK LIFT (1)

STARKLIFT (1)

SUMITOMO (2)

TAYLOR (1)

TOYOTA (10)

**YALE (13)** 

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**CATERPILLAR RT80** 8,000 LB ROUGH TERRAIN ... TIPTON, CA, Feb 12, 2010



Closer Look

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New Search

Construction > Lifts - Rough Terrain Forklift - 10 Manufacturers Found

View All (this list)

**CASE** (1)

CATERPILLAR (6)

**HUMMERBEE (1)** 

INGERSOLL-RAND (4)

JCB (2)

JOHN DEERE (2)

LIFTALL (2)

PRINCETON (1)

SELLICK (1)

TCM (2)

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2005 LULL 644E42 6,000 LB 4X4X4 TELESCOP... ORLANDO, FL, Feb 15 - 20, 2010



Closer Look

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New Search

Construction > Lifts - Telescopic Forklift - 16 Manufacturers Found

View All (this list)

CATERPILLAR (9)

CHAMP (1)

CLAAS (2)

**GEHL** (7)

GENIE (1)

GRADALL (32)

INGERSOLL-RAND (7)

JCB (14)

JLG (21)

**LULL** (17)

MANITOU (2)

MERLO (2)

SKYTRAK (50)

**TEREX (44)** 

TOVEL (1)

TRAVERSE LIFT (3)

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New Search

Construction > Pipeline - Pipelayer - 1 Manufacturers Found

View All (this list)

CATERPILLAR (2)

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DITCH WITCH 6510DD 4X4X4 COMBO TRENCHER ORLANDO, FL. Feb.15 - 20, 2010



Closer Look

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New Search

Construction > Trencher - 12 Manufacturers Found

View All (this list)

BARRETO (1)

CASE (6)

**CHARLES MACHINE WORKS (1)** 

**DITCH WITCH (18)** 

**EVERSMAN (1)** 

JP CARLTON (1)

MIKE SMEAR (1)

OTHER (2)

SAND IRON & STEEL (1)

TESMEC (1)

TRENCH TECH (1)

VERMEER (19)

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