



**NABORS
WELL SERVICES CO.**

3651 Pegasus Drive
Suite 101
Bakersfield, California 93308

Phone: 661.391.3800
Fax: 661.391.3806
www.nabors.com

California Contractor's
License No. 115753-A

December 27, 2007

Clerk of the Board
Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Public Comments on Modification to Proposed Regulation for In-Use Off-Road Diesel Vehicles

Dear Board,

Nabors Well Services Co (NWSC) would like to thank the California Air Resources Board (CARB) and the CARB staff for the opportunity to participate in the development of In-Use Off-Road Diesel Vehicle Regulation (Off-Road Regulations) for off-road mobile equipment operating in California. NWSC is submitting its comments and concerns within the 15 day comment period related to the modification of the proposed regulation. NWSC is requesting that the Board take these suggestions, recommendations and concerns under advisement in the developing of the modified language.

Verified Diesel Emission Control System

The regulation requires each fleet to meet a fleet average emission rate target for PM or apply the highest level Verified Diesel Emission Control System (VDECS) to 20 % of its horsepower per year. One of NWSC's concerns with the proposed regulation is the 20% retrofit requirement. If a fleet owner has an inventory of Tier 0 engines, installation of VDECS on Tier 0 engines would be required in the early years to be in compliance. As the regulation moves forward, the fleet owner would be required to replace the Tier 0 and the VDECS with newer engine. NWSC's recommendation is for the Board to reduce the PM retrofit requirement from 20% to 10% per year. The Board should adopt a regulation that requires one capital investment, not several investments. In addition, the Board should allow fleet owners time to generate the capital needed to make the investment and time to install the new equipment.

NWSC's recommendation is for the Board to focus on the replacement of all Tier 0 and Tier 1 engines that are not certified to a PM standard. During the repowering process, NWSC has reduced NOx emissions by 75% and PM emissions by 83% when replacing Tier 0 engines with Tier 3 engines. By focusing on the replacement of the older Tier 0 and Tier 1 engines, the Board achieves a reduction in NOx and PM while allowing fleet owners to make one capital investment.

NWSC has started its research on VDECS and has discovered some important issues. HUSS, LLC is the only off-road Level 3 VDECS that are verified through CARB. HUSS's diesel particulate filter system will operate about 8-10 hours and requires a regeneration time of 35 minutes. These operating times and regeneration times are for Tier 2 and Tier 3 engines. The operating times and regeneration times for Tier 0 and Tier 1 engines will be much shorter. During cost analysis discussion at the Board's adoption hearing, NWSC informed the Board that the cost of a VDECS for a 450 horsepower (hp) engine would be \$23,000. From NWSC's latest research, HUSS stated that to

increase the operating hours of the equipment, HUSS would be required to install two VDECS at a total cost of \$42,000 to \$50,000. Please keep in mind this is the Tier 2 and Tier 3 engines.

NWSC has several concerns with the use of VDECS such as the regeneration time, the useful life of the VDECS, the warranty, the cleaning process, the number of VDECS needed in the installation, exhaust temperatures requirement and the engine shutdown time. NWSC is required to keep the well bore pressures under control at all times, and the rig engine is a major component in maintaining that control. NWSC cannot experience a surprise shutdown of the engine due to a VDECS.

The CARB staff has reported that as the demand for VDECS increases, manufacturers will verify and install more VDECS. With the accelerated timetable in the regulation, large fleet owners will be required to make decision in the first part of 2009 to be in compliance in 2010. NWSC's recommendation is for the Board to direct staff to review and report on the development of new VDECS in the middle of 2008 and 2009.

Outreach Program

In the Staff Report, NWSC located two very important statements. "For the regulation to be fair to fleets that would spend considerable funds and efforts to comply, fleets must be assured that their competitors would also be complying." "Staff recognizes that creating a level playing field for all affected fleets is important, and is committed to obtaining the resources necessary to do so." After the development of the Statewide Portable Equipment Registration Program (PERP), numerous companies spent large amounts of capital complying with the regulations while non-compliance companies spent none. When non-compliance companies were located through the inspection process, CARB staff amended the regulations allowing for several amnesties. NWSC is asking the Board and CARB staff to guarantee that this will not happen in the Off-Road Regulations.

NWSC's recommendation is for the Board to direct staff to develop a complete outreach program and make sure that all the stakeholders are informed. In addition, the Board should modify the regulations requiring non-compliance companies to make all investments for past compliance at the time they are located.

Appeals – Hearing Procedures

Section 2449(e)(8)(A)(2) states, "A request for a hearing shall be filed within 20 days from the date of issuance of the notice of the denial." Section 2449(e)(8)(A)(15) states, "The Executive Officer shall render a final written decision within 60 working days of the last day of hearing." NWSC's recommendation is for the Board to change the regulations from 20 days to 60 working days for fleet owners.

Cost Analysis

NWSC is concerned about the cost analysis numbers used in the Staff Report. NWSC has a long history of experiences in the repowering of equipment. NWSC believes that the cost analysis used in the Staff Report is grossly understated.

NWSC's recommendation is for the Board to direct staff to review the cost analysis of the regulation at the end of 2010 using the large fleet actual numbers. In the Staff Report, staff has stated that fleets will have to pass on at least some of the costs to their customers. The above review should validate if large fleets were able to pass that cost on to their customers.

Cumulative Cost Analysis

NWSC's recommendation is for the Board to direct staff to work with industry to develop a cumulative cost analysis for the Portable ATCM, the Off-Road ATCM and the On-Road ATCM. Many companies like NWSC have equipment regulated by all three regulations, and the Board should understand the total impact of these regulations on the companies and the economy.

NWSC has several concerns and comments on the Surplus Off-road Opt-in for NOx (SOON) program, and NWSC will make those comments when the 15 day comment period is opened.

NWSC is requesting that the Board take these recommendations and concerns under advisement in modifying the Off-Road Regulations. NWSC and several other stakeholders have expressed our concerns at the Board meeting and each workshop. The Board should identify the issues of concern by the stakeholders and work collectively to achieve consensus on the solutions. NWSC continues to look forward to working on the development of an effective and reasonable approach to the Off-Road Regulations. If you have any questions regarding our comments, please contact me at 661-391-1623 or by e-mail at james.thomas@nabors.com.

Sincerely,

A handwritten signature in black ink that reads "James Thomas". The signature is written in a cursive, flowing style.

James Thomas
Administrative & Regulatory Affairs Manager