

Port Truck Study

Proposed Strategies for existing trucks in port service:

- 1) Replace all **pre-94 trucks** with '98 and newer models, and retrofit with DPFs (85% PM controls)
- 2) Replace all **pre-03 trucks** with '03 and newer models, and retrofit with DPFs (85% PM controls)
- 3) Phase 1: Replace all **pre-94 trucks** with '98 and newer models, and retrofit with DPFs (85% PM controls) **and NOx controls** (25% control)

Phase 2: Replace all trucks with 2010 or newer models by 2019

Fleet Expansion Requirements:

Controlling new trucks “entering into port service” after 2006 (Starting next year, all new trucks serving ports would have to be MY 2003 or newer):

2003 & newer + DPF by 2007

2007 & newer by 2012

2010 & newer by 2015

Comments:

We greatly appreciate your efforts to assess possible mitigation strategies for port trucks. Addressing pollution from goods movement related trucking is a major priority; in fact, we urge you to consider all trucks serving goods movement related facilities (including rail yards, distribution centers and air cargo) in the development of these clean up strategies. We agree that the priority should be to maximize diesel PM reductions by 2010. The following comments include several concerns over the draft proposal and several recommendations to strengthen the proposal.

Reducing Pollution from Goods Movement Related Trucking is an Urgent Public Health Matter.

The diesel trucks that carry cargo throughout California spew a toxic brew of particulate matter (PM), and smog forming nitrogen oxides (NOx) and volatile organic compounds.¹ In addition, diesel exhaust can contain an estimated total of 450 different chemicals, about 40 of which are listed by the California Environmental Protection Agency as toxic air contaminants with negative effects on health and the environment.² Health impacts of diesel exhaust range from respiratory and cardiopulmonary illnesses to elevated cancer risks and premature deaths.

Californians living near goods movement facilities – ports, airports, rail yards, distribution centers and truck routes – face much higher health risks than average due to the increased pollution. Dozens of studies have shown adverse health impacts among people, particularly children, living or going to school close to high traffic roadways, and impacts appear to be worst near roadways with heavy diesel truck traffic. For example,

¹ California Air Resources Board, “Draft Diesel Exposure Assessment.” A-7 (1998).

² JL Mauderly, “Diesel exhaust,” *Environmental Toxicants: Human Exposures and Their Health Effects*, ed. M Lippman (New York: Van Nostrand Reinhold, 1992).

those living within 650 feet of heavy truck traffic experience increased asthma hospitalizations, according to one recent study.³ Not only is close proximity to freeways and heavy truck routes linked to respiratory illnesses, the exposure to elevated diesel PM levels contributes to greatly elevated cancer and premature mortality risks. Some health risk analysis data shows cancer risks as high as 100 in a million near freeways,⁴ while limited air monitoring done near a major truck route in West Oakland showed increased cancer risks on the order of 1000 in one million.⁵

Clean-up Strategies Should Be Flexible to Ensure Maximum Pollution Reductions and Cost-effectiveness.

Rather than setting a rigid course for a truck clean-up program through 2020, we believe that instead, priorities should be set out clearly and periodically re-evaluated as technological, economic and other circumstances change. We therefore propose the following priorities in place of the three separate strategies proposed:

- 1) Replace all pre-1994 model year trucks with 1998⁶ or newer models, *and* retrofit the replacement vehicles with level 3 PM controls (achieving 85% or higher reductions), if the vehicles do not already meet a 0.01 g/bhp-hr PM standard. This is similar to the proposed Strategy 1, however, it should be considered a first step in a series. This should be completed within three years, or by the end of 2009.
- 2) Retrofit with level 3 PM controls (achieving 85% or higher reductions) all trucks not previously retrofitted with level 3 PM controls and that do not meet a 0.01 g/bhp-hr PM standard (for example, most pre-2007 model years). This should commence upon completion of the above priority with a goal of requiring no more than two years to complete.
- 3) Retrofit all pre-2003 model year trucks with the best available NOx controls, where feasible and where cost-effectiveness thresholds would be met according to Carl Moyer Program guidelines. This should commence in tandem with the above priority and require not more than two years to complete.

³ Lin, S. et al. "Childhood asthma hospitalization and residential exposure to state route traffic." Environ Res. 2002;88:73-81

⁴ Air Quality and Land Use Handbook: A Community Health Perspective, CARB, April 2005, p. 9. Note: This risk number is based on the Roseville Rail Yard Study, on a stretch of I-80 that handles 10,000 truck trips per day.

⁵ Air Quality monitoring was done by the Natural Resources Defense Council using an Aethalometer for three to five days inside several residences near 7th Street. Average weekday concentrations at the two locations were 2.1 µg/m³ of black carbon, corresponding to an elevated cancer risk of 1200 per million based on cancer risk methodology from the following sources:

(1) STAPPA/ALAPCO, Cancer Risk from Diesel Particulate: National and Metropolitan Area Estimates for the United States, March 15, 2000.

(2) Cal EPA, Office of Environmental Health Hazard Assessment, Air Toxics Hot Spots Program Risk Assessment Guidelines, August 2003; http://www.oehha.ca.gov/air/hot_spots/pdf/HRAguidefinal.pdf.

⁶ A program administrator must ensure that any 1998 or 1999 replacement trucks with "defeat devices" allowing higher NOx emissions have been "reflashed" to comply with original certification standards.

- 4) With the completion of the above priorities, ARB should re-assess the most cost-effective strategies that remain based on the most recent inventory, technology and economic data.

We are concerned that while the proposed Strategy 2 and 3 appear to achieve high NOx reductions in the future, these reductions may be significantly over-stated and costs and other hurdles may be vastly under-estimated. For instance, the cost of trucks meeting the 2010 NOx standard may be much higher than expected, while availability may prove scarce. In the meantime higher efficiency NOx retrofit technology may become more widely available. It is not prudent to commit to low-efficiency NOx retrofits or replacements for 2003 and newer vehicles at this time.

Adequate Financial Assistance Must Be Available for Low-Income Truckers

As noted in this study, most truckers serving ports have very limited ability to afford newer trucks or retrofits. Without adequate financial assistance, it is not clear how owner-operators and small fleets will be able to cope with the requirements. Additionally, as the fleet expands and more trucks serve the ports, it is not clear how the new truckers will be able to afford mandatory new truck requirements over their counterparts.

Specifically, attempting to control new trucks that “enter into port service” after 2006 may prove extremely difficult. For instance, how would ARB determine which trucks are newly entering into port service and how would ARB enforce the proposed requirements that all new trucks be model year 2003 and newer by 2007? According to this study, the cost of complying with this requirement in the first year would be almost \$50,000 (Based on the chart on p. 33, the cost to purchase a compliant 2003 MY truck in 2007 is ~\$55,000, which is roughly \$40,000 more than purchasing a ten year old truck, the assumed age of trucks entering port service. The truck owner would also have to install a DPF on that truck for an additional \$8,500 plus added maintenance costs.) This first proposed milestone alone would create a huge inequity between truckers who have access to financial assistance and “new service” truckers who do not.

Further, the lines between “new service” truckers and truckers currently serving the ports may be blurry. For example, some owner/operators may be engaged in other work for much of the year, yet pick up extra work serving the port during busy times of the year, such as late Fall. Finally, enforcement of the “new service” truck proposal appears to be very difficult and ill-defined.

Mandatory Clean-up Requirements Must Serve as a Backstop to Ensure That All Polluting Trucks Are Replaced.

While most truckers cannot afford to meet clean-up requirements without financial assistance, they may not opt to accept that financial assistance without a mandatory deadline for clean-up.

An Advisory Body of Stakeholders Should Be Used to Assist with the Design of and Ensure the Efficacy of the Program.

Port Truck business dynamics (p. 52) needs to be further explored & monitored moving forward. We suggest an advisory committee or working group representing all interested stakeholders to sort through these issues.

Other notes:

Container Fees (p. 48): Fee system described here seems to indicate that truckers will pay as opposed to shippers, although it's not explicitly explained.

-Cost per container estimates are vastly under-stated; they don't account for program administration, the expanding truck fleet over time or any other contingencies.

- Short sighted proposal for fees only on containers being trucked. Those leaving via rail also pollute.