

State of California
AIR RESOURCES BOARD

**Final Statement of Reasons for Rulemaking,
Including Summary of Comments and Agency Response**

PUBLIC HEARING TO CONSIDER THE PROPOSED AMENDMENTS TO THE ON-ROAD HEAVY-DUTY DIESEL-FUELED RESIDENTIAL AND COMMERCIAL SOLID WASTE COLLECTION VEHICLES REGULATION TO INCLUDE HEAVY CRANES

Public Hearing Date: January 24, 2019
Agenda Item No.: 19-1-2

I. GENERAL

- A.** The Staff Report: Initial Statement of Reasons for Rulemaking (staff report), “Public Hearing to Consider the Proposed Amendments to the On-Road Heavy-Duty Diesel-Fueled Residential and Commercial Solid Waste Collection Vehicles Regulation to Include Heavy Cranes”, released December 4, 2018, is incorporated by reference herein. The staff report describes the rationale for the proposed amendments. On December 4, 2018, CARB made available to the public all references relied upon and identified in the staff report.

The Board approved amendments to add reporting requirements for solid waste collection vehicles (SWCVs), to clarify the definition of vehicles subject to the regulation, and to require reporting for all fleets that own or operate SWCVs with 1960 to 2006 model year diesel engines. These changes will improve enforceability and will provide information needed to avoid delays with California Department of Motor Vehicles (DMV) registration starting in 2020.

The Board also approved amendments that expand the scope of the regulation to include diesel-fueled on-road single engine heavy cranes (heavy cranes) with a newly-added phase in schedule to reduce particulate matter (PM) and oxides of nitrogen (NOx) emissions. The approved amendments remove the existing PM filter requirements and provide more time for heavy crane operators to upgrade to cleaner equipment without disrupting business operations and continuing to reduce emissions to protect public health. They also recognize the high cost of replacing this specialized equipment and the limited ability to safely upgrade existing cranes by replacing the engine or installing a PM filter retrofit due to crane certification safety standards. The approved amendments include credits for early action, retain a fleet reporting requirement and improve enforceability.

B. MANDATES AND FISCAL IMPACTS TO LOCAL GOVERNMENTS AND SCHOOL DISTRICTS

The Board has determined that this regulatory action will not result in a mandate to any local agency or school district, the costs of which are reimbursable by the state pursuant to Part 7 (commencing with section 17500), Division 4, Title 2 of the Government Code.

C. CONSIDERATION OF ALTERNATIVES

For the reasons set forth in the Staff Report, in staff's comments and responses at the hearing, and in this Final Statement of Reasons, the Board determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed, or would be as effective and less burdensome to affected private persons, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provisions of law than the action taken by the Board.

II. MODIFICATIONS MADE TO THE ORIGINAL PROPOSAL

A. MODIFICATIONS APPROVED AT THE BOARD HEARING AND PROVIDED FOR IN THE 15-DAY COMMENT PERIOD

No modifications were made to original proposal.

B. NON-SUBSTANTIAL MODIFICATIONS

Existing language for the definition of "'Retirement' or 'Retire'" was erroneously omitted from the regulation order, section 2021. Staff has inserted the language back into the Final Regulation Order in strikeout format, to indicate the original intention to remove this definition, because the words "Retirement" and "Retire" are no longer used in this regulation. Note that the regulation order separately defines "Retired," and that word is used in the regulation.

III. DOCUMENTS INCORPORATED BY REFERENCE

No new documents were incorporated by reference.

IV. SUMMARY OF COMMENTS AND AGENCY RESPONSE

Written comments were received during the 45-day comment period in response to the December 4, 2018, public hearing notice, and written and oral comments were presented at the Board Hearing by commenters. Listed below are the organizations and individuals that provided comments:

Reference Code	Commenter	Affiliation
KONLE1	Konle, Mike (January 15, 2019)	Champion Crane
KONLE2	Konle, Mike (January 24, 2019)	Champion Crane
KONLE3	Konle, Mike (January 24, 2019) (Testimony)	Champion Crane
PATTI	Patti, Tom (January 24, 2019)	Supervisor, San Joaquin County
VLAMING	Vlaming, Michael (January 24, 2019)	Crane Owners Association, Mobile Crane Operators
KRAZAN	Krazan, Tom (January 24, 2019)	California Groundwater Association
RUSHING	Rushing, Rocky (January 24, 2019)	Coalition for Clean Air
PRESTON	Preston, Thomas (January 24, 2019)	Reliable Construction
DURDELLA	Durdella, Todd (January 24, 2019)	BHC Crane

1. PM Filters

Comment 1: Safety is one of our big concerns. OSHA will not let us modify the cranes from original ANSI and DIN certifications. Adding a PM filter will create back pressure and affect horse power required to operate crane safely. Shutting down to regenerate in the middle of a lift could be life threatening. OSHA will not let us modify cranes PM filters ECT (have to replace 8 cranes \$ 6,400,000.00). I have ordered the filters but have not installed yet hoping for some relief approximately \$ 200,000.00 worth of filters. Now I can't install and must replace cranes. (KONLE1)

Comment 2: OSHA requirements prohibit installation of particulate matter (PM) filters due to safety concerns with any modifications to certified heavy cranes. PM filters are not feasible for heavy cranes due to low hours of use and low operating temperatures. CARB must exempt heavy cranes since PM filters cannot work on heavy cranes nor can heavy cranes be safely operated with PM filters installed. (KONLE2)

Comment 3: Forcing the small crane owners to put PM filters on their cranes illegally is really a big hardship on us, because we have a choice of illegally putting the PM filter on the older cranes or selling it and getting it out of the state of California. (KONLE3)

Comment 4: I gave you guys a brochure that shows that OSHA won't allow us to change it unless the manufacturer approve it. I've also got letters from all the manufacturers saying that they will not allow us to modify the crane because it will take the certification off of it. And with all the compliance regulations that we're up against, taking the certification away from the crane means that we can't use it. (KONLE3)

Agency Response: The feasibility of installing PM filter retrofits is beyond the scope of the proposed regulation because PM filter retrofits are not required in the amended regulation. The approved amendments remove the PM filter requirements in recognition that PM filter installations may not be feasible for all heavy cranes. This issue is described in the staff report, where staff acknowledge that diesel-fueled on-road single engine heavy cranes (heavy cranes) face unique challenges regarding installation of a PM filter. The approved amendments include a phase-in schedule that requires fleets to upgrade to new or used cranes with 2010 or newer model year engines from 2019 to 2027 but does not require any PM filter retrofits. In summary, the schedule provides more time for crane operators to upgrade equipment without disrupting business operations, does not require any modifications to existing cranes, and continues to make progress in reducing emissions to protect public health.

Comment 5: Commenter submitted a letter from CARB regarding the recall of two Cleaire PM filters, a Caltrans weight requirements table, DOT inspection reports, copies of CARB webpages on diesel particulate filter regeneration, heavy-duty diesel emissions and emission controls, and photos showing space limitations for retrofits, used PM filters, and vehicle fires. Commenter also expressed concerns regarding: crane engines not getting hot enough per filter manufacturer's specifications; crane manufacturers not approving the use of filters; regeneration during crane lift creating major safety hazards; added weight of filters would cause problems with Caltrans weight restrictions; filter reducing operator's visibility and space limitations; and that gantry cranes have been given an exemption. (KONLE2)

Agency Response: The concerns about weight, safety, and feasibility of installing PM filter retrofits is beyond the scope of the proposed regulation because PM filter retrofits are not required in the amended regulation. Gantry cranes are subject to separate regulations. Any exemption gantry cranes may have regarding PM filter retrofits is beyond the scope of the proposed amendments.

CARB has a program in place to resolve any issues with the installation of PM filters and requires manufacturers of PM filters to be verified by CARB to ensure performance and safety. The Cleaire LongMile was recalled on August 16, 2012 and Cleaire suspended sales of the systems and was required to immediately recall and remove them from service.

2. Costs

Comment 6: The report states no economic impact to industry but will be a huge impact to Champion Crane. No impact to infrastructure? Roads Bridges and buildings will all sky rocket in price. (KONLE1)

Comment 7: It's \$450,000 to buy a new one. I can't buy a new one, but I am going to replace my 1990 truck very soon, once I've paid off my 2009, which will not be compliant very soon. (PATTI)

Comment 8: This issue would affect about a third of my fleet. It would cost me more to replace that third of my fleet with new compliant cranes that it did for me to buy the entire fleet upon purchase eight years ago. (DURDELLA)

Agency Response: The approved amendments relax existing requirements for heavy cranes and significantly reduces the costs of upgrades that would otherwise be required to comply with the existing requirements of the existing Truck and Bus regulation. The approved amendments provide more time for heavy crane owners to upgrade to new or used cranes with 2010 model year or newer engines and no longer requires heavy cranes to be replaced if they were equipped with PM filters and in the fleet prior to 2018. Overall, when compared to the existing requirements of the 2011 Truck and Bus regulation the approved amendments lower the costs in every year and smooths out compliance costs over several years with a total savings of about \$59 million in compliance costs from 2019 to 2032.

Comment 9: Big companies work 24 hours a day and make millions of dollars a month. I am a small little dot when it comes to the economic impact. I am an important component to my local economy and the people that I employ. The mandate is not one size shoe fits all. (PATTI)

Comment 10: These cranes provide a vital service to the California economy. And their ability to continue to operate both as a small fleet company, a medium-sized fleet company, or a large fleet company is very important to California and its industry. Because you have different sized fleets, you have different impacts. (VLAMING)

Comment 11: The one size fits all is what our problem is here. And it was mentioned that the level playing field that all the crane companies would be on a level playing field. The larger crane companies have a greater advantage over the smaller crane companies because they have multi-state facilities, and they can move their older cranes out of California. (KONLE3)

Comment 12: All the small and medium fleets out there in the state have an impact in rural communities. The rural community is really the one that is impacted most by the proposed regulation. (PRESTON)

Comment 13: One size fits all is a problem with implementation of CARB rules. This new change to truck and bus rules gives large crane companies a huge advantage over the small family owned business. (KONLE1)

Agency Response: The commenter suggests that applying the same regulatory requirements for all crane operators results in cost advantages for larger crane fleets and out of state fleets while resulting in disadvantages to smaller fleets. However, the approved amendments lower costs for all fleets and reduces the impacts of compliance costs for large and small crane businesses in urban and rural communities. In addition, the upgrade requirements of the phase-in option are based on a percentage of the fleet. Therefore, the first crane to be replaced in a smaller fleet would likely be later than the first crane replacement in a larger fleet. Other options, such as the engine model year schedule or the low-use exemption, are equally available to smaller and larger fleets because they apply to the individual vehicle. Please see the response to comment 6 regarding how the approved amendments lower costs of compliance by relaxing existing requirements and providing more time to upgrade equipment.

Comment 14: Seven of my off road cranes are not replaceable (no new cranes available.) Need exemption for these at a cost of \$ 5,500,000.00 but not available at any cost plus another \$ 6,000,000 for fork lifts, welders, and balance of trucks. This new regulation offers no relief to our industry especially the small business owner. We are struggling to comply. (KONLE1)

Comment 15: CARB must exempt heavy cranes from the off-road regulation. The heavy cranes are subject to multiple regulations therefore fleets are burdened with cumulative costs. (KONLE2)

Comment 16: The commenter submitted letters from crane manufacturers regarding installation of PM filters for both off-road and on-road heavy cranes. The letters also address the availability, costs, and resale of off-road and on-road heavy cranes. (KONLE2)

Agency Response: The concerns expressed regarding availability, costs, resale value, and PM filters for off-road cranes, such as those costing \$3 to \$5 million, is beyond the scope of the proposed amendments because those cranes are subject to the off-road diesel-fueled vehicle regulation, not this regulation. Please see the response to Comment 1 regarding concerns about PM filter availability or installation issues for on-road heavy cranes. Please see the response to comment 6 regarding how the approved amendments lower costs of compliance by relaxing existing requirements and providing more time to upgrade equipment.

3. Emissions

Comment 17: Collectively, they [heavy cranes] have a very small footprint. But I will tell you that we share your mission in clean air in achieving cleaner air. The key is the balancing of interests and resources in accomplishing the goals, right? Success is truly a balance of where you allocate your resources to achieve maximum success. (VLAMING)

Comment 18: To put the small business out of business for the amount of PM that is generated from less than 300 Cranes in the whole state of California. (KONLE1)

Comment 19: Our cranes costs anywhere from \$750,000 to three or four or five million dollars a piece. And they have the same exact motor as a Peterbilt truck. So the cost comparison to the advantage of cleaning up the air makes it a little tough on the small businesses like we have. (KONLE3)

Agency Response: Emissions reductions are needed to reduce localized risk from exposure to carcinogenic diesel PM, to reduce impacts of diesel engine emissions on mortality and other health effects and to meet State Implementation Plan commitments to meet federal air quality standards. Although heavy cranes are a relatively small population, emissions reductions are need from all feasible sources to meet air quality needs and to achieve the maximum feasible reduction of toxic diesel PM. Projected statewide emissions in 2023 from the proposed amendments result in 0.34 tons per day fewer NOx emission benefits and 0.007 tons per day fewer PM2.5 emission benefits from heavy cranes but achieves nearly the same PM2.5 emissions reductions by 2027 when compared to the 2011 Truck and Bus regulation. For NOx, the proposed

amendments result in 0.15 tons per day fewer emission benefits by 2027. The proposed regulation achieves a better balance between the needed emissions reductions and the ability of fleets to comply. Please see the response to comment 6 regarding how the approved amendments lower costs of compliance by relaxing existing requirements and providing more time to upgrade equipment.

4. Low Use Exemption

Comment 20: We need a 20,000 mile low-use exemption. (PATTI)

Comment 21: Increasing the low use, low mileage exemption – we would support that, because it really helps the small and medium fleets. (VLAMING)

Comment 22: The unintended consequences of losing the little guy is going to cause more pollution than giving us a break in the travel time or – I mean the minimum mileage that we can travel. Twenty thousand miles would save us all. I had 5000 miles and I had to park my cranes for three month just to comply with the 5000 miles. (KONLE3)

Comment 23: A low use exemption with a larger mileage limit would allow us the opportunity to really get our fleet in line but still continue to be a successful member of the state, community. (PRESTON)

Comment 24: I would appreciate the 20,000 mile, or thereabouts, instead of the 1,000 mile, because it allows me more time to generate the profit required to be able to replace the cranes in a timely manner. (DURDELLA)

Comment 25: 1,000 miles is not a problem? The cost of insurance, fuel, and maintenance would not even be covered. (KONLE1)

Agency Response: Crane usage data collected by CARB and information provided by industry representatives shows the average miles travelled by a heavy crane is 10,000 miles per year; therefore, increasing the mileage threshold of the low-use exemption to 20,000 miles per year from 1,000 miles per year would effectively be a complete exemption from all clean-up requirements. Exempting heavy cranes for the clean-up requirements could result in increased emissions and would be inequitable for fleets who made upgrades to comply. The Board determined the combination of a relaxed compliance requirement with the removal of the hourly limit in the existing low-use exemption was the appropriate balance in implementing a feasible compliance schedule while continuing to reduce criteria pollutant emissions to meet State Implementation Plan requirements and to reduce exposure to toxic diesel PM. The 1,000 mile limit for the low-use exemption also remains consistent with the low use exemption for solid waste collection vehicles, and with other similar regulations adopted by the Board including the Truck and Bus regulation. See the response to comment 17 regarding the need for emission reductions.

5. Other

Comment 26: Federal law requires repairs or adjustments must be done according to existing manufacturer's specifications. The California Air Resources Board (CARB)

does not have the authority to require changes to existing manufacturer's specifications. Therefore, the proposed amendments violate ex post facto regulations. (KONLE2)

Agency Response: The approved amendments require fleets to upgrade to new or used heavy cranes (that meet manufacturer specifications) and do not require any retrofits or changes to existing manufacture specifications. CARB has been granted both general and specific authority under the Health and Safety Code (HSC) to adopt the approved amendments. HSC sections 39600 (General Powers), 39601 (Standards, Definitions, Rules and Measures), and 39602.5 (Adoption of Rules and Regulations) confer on CARB, the general authority and obligation to adopt rules and measures necessary to execute the Board's powers and duties imposed by State law and to attain national ambient air quality standards in all areas by applicable attainment dates. HSC sections 43013 and 43018(a) provide broad authority to achieve the maximum feasible and cost-effective emission reductions from all mobile source categories, including both new and in-use on-road and off-road diesel engines used in motor vehicles. Additionally, California's Air Toxics Program mandates that ARB identify and control air toxics emissions in California. The approved amendments do not require changes to existing manufacturer's specifications. In addition, the proposed regulation is not ex post facto because it does not criminalize or otherwise punish actions that were legal when originally taken. Instead, the proposed regulation relaxes the compliance schedule for heavy cranes, compared to what was legally required prior to these amendments. Thus, the legal burden is lessened, not increased, due to the approved amendments.

Comment 27: Commenter submitted on January 24, 2019, documentation that summarizes a ballot measure to repeal the gas tax (Senate Bill 1). The document summarizes that SB 1 was designed to increase transportation related taxes and fees and was expected to generate an estimated \$52.4 billion between 2017 and 2027. (KONLE2)

Agency Response: The taxes and fees referenced in SB 1 are beyond the scope of the proposed regulation because ballot measures and income from taxes and fees were not addressed in the proposed amendments.

Comment 28: The commenter submitted documentation that provides information on the type of vehicles owned by Champion Crane including a fleet summary from the Truck Regulation Upload and Compliance Reporting System. (KONLE2)

Agency Response: The comment is beyond the scope of the proposed amendments because specific fleet summaries from Truck Regulation Upload and Compliance Reporting were not addressed in the proposed amendments. To the extent that the fleet information was intended to raise concerns about costs, please see the response to comment 6 on how the approved amendments reduce compliance costs by relaxing existing requirements and providing more time to upgrade equipment.

Comment 29: Commenter submitted an article entitled, The EPA Cleans Up Its Science, by Steve Milloy that discusses the data supporting the health risk associated with PM_{2.5} and the transparency of that data. (KONLE2)

Agency Response: Although the submitted document is beyond the scope of the proposed amendments, CARB has addressed the concerns on the science behind the adverse health effects of diesel PM in the past. As stated in the Final Statement of Reasons for Rulemaking (December 2010), CARB has carefully reviewed all studies that have been performed in the United States on the relationship between long-term PM_{2.5} exposure and mortality, as has the U.S. EPA in its review of the NAAQS for particulate matter. In addition, U.S. EPA and CARB have also critically evaluated the methods used in each study to place the most weight on the studies that have used the strongest methodologies. CARB staff's conclusions about the relationship between long-term exposure to PM_{2.5} and mortality are in alignment with those of the U.S. EPA, the World Health Organization, Health Canada, the Scientific Review Panel (SRP) and the British government. These conclusions have been publicly peer reviewed by multiple independent bodies worldwide. In addition, CARB's evaluation of diesel PM was made available to the public and was formally reviewed by the SRP established under HSC section 39670.

CARB has an extensive transparent public review process for all proposed regulations. The public process for the approved amendments included the following:

- Public workshops (held on September 19, 2018, in Sacramento (with webcast) and on September 21 in Diamond Bar);
- Publishing an initial statement of reasons that was made available for a 45-day public comment period beginning on December 4, 2018; and
- A Board hearing where interested members of the public had the opportunity to present comments orally or in writing.

Comment 30: We own drill rigs. We are in an area that groundwater is our only water source. You only have a small number of drilling companies. Statewide there are only 1,000 drill rigs total. I found out about SB 1. It told me that if I have very low use on my vehicles that I am going to have to retire it in 18 years. (KRAZAN)

Agency Response: The comment on drill rigs is beyond the scope of the proposed regulation because drill rigs are subject to either the Truck and Bus or the Off-Road regulation. The commenter appears to be referring to the "useful life" schedule provision in SB 1. The approved amendments include an optional replacement schedule by model year for heavy cranes to ensure consistency with SB 1 "Useful Life" criteria.

Agency Response:

Comment 31: The Coalition for Clean Air (CCA) neither supports or opposes the proposed amendments. We understand the complications faced by the crane owners, operators, as expressed today. CCA would ask the Board to go no further than the proposed amendments. (RUSHING)

Agency Response: The Board approved the staff proposed amendments without additional changes.

V. Peer Review

Health and Safety Code Section 57004 sets forth requirements for peer review of identified portions of rulemakings proposed by entities within the California Environmental Protection Agency, including CARB. Specifically, the scientific basis or scientific portion of a proposed rule may be subject to this peer review process. The proposed amendments did not require peer review because all scientific review of diesel PM, including health effects and exposure, was performed during the identification phase of diesel PM as a toxic air contaminant under the California's Air Toxics Program, established under California law by AB 1807 (stats. 1983, ch. 1047, the Tanner Act) and set forth in the HSC sections 39650 through 39675. The program mandates that CARB identify and control air toxics emissions in California. The identification phase of the Air Toxics Program requires CARB, with participation of other state agencies such as the Office of Environmental Health Hazard Assessment (OEHHA), to evaluate the health impacts of, and exposure to, substances and to identify those substances that pose the greatest health threat as toxic air contaminants.