

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. ACTION TAKEN IN THIS RULEMAKING

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 approved amendments. On December 4, 2018, CARB made available to the public all references relied upon and identified in the staff report.

The Board approved the 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.

On January 24, 2019, following a 45-day comment period, the California Air Resources Board (CARB or Board) held a 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, as described in the Staff Report and associated Notice of Public Hearing (45-Day Notice). The regulation requirements are included in title 13, sections 2021, 2021.1, 2021.2, and 2021.3 of the California Code of Regulations.

Written comments were received from one individual during the 45-day comment period. Oral comments were given by 9 individuals during the January public hearing. One written comment was received at the hearing. After the January 24, 2019, public hearing, staff proposed modifications to the originally proposed regulation, to improve consistency with the staff report, for clarification and to add references.

The text of the proposed modifications to the originally proposed regulation and supporting documents were made available for a supplemental 15-day comment period through a “Notice of Public Availability of Modified Text and Availability of

Additional Documents” (15-Day Notice). The 15-Day Notice, modified regulatory language, and additional supporting documents were posted on May 29, 2019, on CARB’s website (<https://ww2.arb.ca.gov/rulemaking/2019/road-heavy-duty-diesel-fueled-residential-and-commercial-solid-waste-collection>), accessible to stakeholders and interested parties. The comment period commenced on May 29, 2019, and ended on June 13, 2019. All modifications to the regulatory language are clearly indicated in the Notice of Public Availability of Modified Text (<https://www.arb.ca.gov/regact/2019/swcv/15daynotice.pdf>). There were no comment letters received during this period.

Resolution 19-2 directed the Executive Officer to finalize the Final Statement of Reasons (FSOR) for the regulatory amendments and to submit the final rulemaking package to the Office of Administrative Law (OAL) for review. This FSOR updates the staff report, and identifies and provides the rationale for the modifications made to the originally proposed regulatory text including non-substantial modifications and clarifications made after the close of the 15-day comment period. The FSOR provides written responses to all comments received during the 45-day comment period, oral comments given at the Board Hearing on January 24, 2019, and written comments submitted during the 15-day comment period.

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.

D. UPDATE OF INFORMATION IN THE NOTICE OF PROPOSED ACTION (NOPA)

The small business determination provided in the NOPA erroneously stated: “[T]he proposed regulatory action would not affect small businesses because the proposed amendments applies equally to all businesses.” 430 businesses will be impacted by the proposed regulations, 281 of which are small businesses. For more information regarding the impact of this action on small businesses, please see the Staff Report.

II. MODIFICATIONS MADE TO THE ORIGINAL PROPOSAL

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

Pursuant to Board direction provided in Resolution 19-2 on January 24, 2019, CARB released a Notice of Public Availability of Modified Text and Availability of Modified Text (15-Day Notice) on May 29, 2019, substantive modifications to the original proposal and the staff rationale for each modification are summarized below. The 15-day changes included a revision to the engine model year schedule for heavy-cranes to be consistent with the description in the staff report on page 41, Table 6. Other modifications were made to provide clarification and to add references. These modifications do not change implementation of the regulation in any way that affects the conclusions of the environmental analysis included in the staff report because the modifications consist primarily of definitional and provision clarifications that do not alter the compliance responses. Therefore, no additional environmental analysis or recirculation of the analysis is required. The following summary does not include all modifications to correct typographical or grammatical errors, changes in numbering or formatting, nor does it include all of the non-substantive revisions made to improve clarity.

- 1) In section 2021(a), staff removed “The regulation” with “Sections 2021, 2021.1, 2021.2, and 2021.3.” This modification was necessary to define which sections of this regulation are applicable to sellers.
- 2) In section 2021(b)(11), staff removed “are subject to this regulation” from the definition of “fleet” because it was superfluous: section 2021(a) already specifies the applicability of the proposed regulation.
- 3) In section 2021(b)(18), staff removed the last sentence, “Information must be reported to the Executive Officer as specified in section 2021.3(a) and records must be kept as specified in section 2021.3(b)” because it was superfluous and not relevant to the definition of “low use vehicle.”
- 4) In section 2021(b)(26), staff added the language “sections 2700 through 2711” after “Verification Procedure.” This modification was necessary in order to correctly reference where in the CCR the verification procedure for Verified Diesel Emission Control Strategy exists.
- 5) Staff removed section 2021(c)(3). This language was not necessary because it is implicit that fleet owners that have fallen out of compliance as a result of these amendments or no longer qualify for a compliance extension will need to bring the fleet into compliance.
- 6) In renumbered section 2021(c)(4), staff added “pursuant to section 2021.2(a).” This modification was necessary to illustrate where the fleet requirements referenced in this section exist in the CCR, in order to comply with the fleet requirements. Many funding programs are intended

to achieve early, surplus emission reductions that would not otherwise be realized through regulation. Therefore, the purpose of the language in 2021(c)(4) is to make it clear that when a funding program specifies that a vehicle cannot be counted towards compliance to be eligible to receive funding, the vehicle will not be counted towards compliance with the SWCV regulation until the contract period to exclude the vehicle ends. Furthermore, the language “unless allowed by the funding program guidelines applicable to the particular source of public funds used for the purchase” was removed from this section, as it was redundant. The preceding sentence already describes that the condition is based on what the funding program allows.

- 7) In renumbered section 2021(c)(6), staff added “pursuant to Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure) sections 2700 through 2711” after “approved by the Executive Officer.” This modification was necessary to illustrate where the standard of approval for removing the PM retrofit exists in the CCR.
- 8) In section 2021(c)(12), staff cited Health and Safety codes 39674, 39675, 42400, 42400.1, 42400.2, 42402.2 and 43016 for the non-compliance and false information penalties. This modification was necessary so that the regulated community can be informed of non-compliance and false information penalties.
- 9) In section 2021(c)(7), staff moved the phrase concerning record retention for model years older than 2010 to the beginning of the paragraph, to resolve an ambiguity in the sentence structure. Staff’s intention was that only fleets with older, pre-2010 model year engines must retain records used to demonstrate compliance with flexibility options or exemptions in the approved regulation. A fleet that upgrades to all 2010 engines no longer needs to report, because 2010 and newer model year engines are certified to the lowest engine emissions standard.
- 10) Staff removed former section 2021(c)(16), regarding exemption for vehicles awaiting sale, because it was duplicative of section 2021(b)(1) and section 2021.3.
- 11) In section 2021.1(a), staff deleted the reference to an effective date. This language was unnecessary because the effective date will be specified in the history note.
- 12) In section 2021.1(b)(2), staff replaced the text with: “Low use solid waste collection vehicles that exceed 1,000 miles in any compliance year must immediately be brought into compliance by meeting PM BACT as specified in section 2021.1(a) or removing the vehicle from the fleet.” The purpose of this section was to emphasize that solid waste collection vehicles that do not qualify for the low-use exemption must be immediately brought into compliance. The change avoids an ambiguity in the timing for

compliance and specifies that the section refers to solid waste collection vehicles.

- 13) In section 2021.2(a), Table A-1, staff replaced “Compliance” with “Upgrade” to conform with the section 2021.2(a). This same modification will apply to section 2021.2(c), Table A-2, and section 2021(c)(4). This modification was necessary in order to be consistent with the ISOR and the rest of the language within section 2021.2. Staff chose 60 days in order to give the regulated community a reasonable amount of time to bring their fleet into compliance after the regulation goes into effect, pursuant to the upgrade requirements within section 2021.2, because heavy crane replacements require a long lead time due to manufacturing delays and modifications needed after they are ordered.
- 14) In section 2021.2(a), staff added “60 days after” to the asterisk explanation language within Table A-1 to conform with the section 2021.2(a). This same modification applies to section 2021.2(c), Table A-2, and section 2021(c)(4). This modification was necessary in order to be consistent with the ISOR and the rest of the language within section 2021.2(a).
- 15) In section 2021.2(c), staff added “for the models years listed” to the end of this section. This change along with the change of “2003 and older” to “1998 to 2003” was necessary to be consistent with the staff report.
- 16) In section 2021.2(c), Table A-2, staff modified the table to correctly reference that engine model years 1998–2003 are require to Upgrade to 2010 or Newer Model Year Engine by January 1, 2019, as explained in the ISOR page 41, table 6. This modification was necessary in order to be consistent with the rationale with the ISOR.
- 17) In section 2021.2(d), staff added “Beginning with the 2020 compliance year.” This modification is necessary to explain that this section applies to the 2020 compliance year, and not 2019. Compliance year 2019 does not apply to this section because the requirement would be retroactive, therefore unreasonable.
- 18) In section 2021.2(d)(2), staff added “heavy crane vehicle or heavy crane engine.” This modification was necessary to explain that that fleet owners may qualify for a manufacturer delay if a replacement crane or engine has been ordered.
- 19) In section 2021.3(a)(2), staff added “Beginning with the 2020 compliance year.” This modification was necessary to explain that this section applies to the 2020 compliance year, and not 2019. Compliance year 2019 does not apply to this section because the requirement would be retroactive, therefore unreasonable.
- 20) In section 2021.3(a)(4), staff identified that fleet owners may submit information online via the Truck Regulation Upload, Compliance and Reporting System (TRUCRS), via mail, or using forms. This modification

was necessary to so that the regulated community can be informed of the method to report.

- 21) In section 2021.3(a)(5)(F), staff added “storage” and “if applicable” with regard to a records address. Large or national fleets often have a distinct records storage address from their street and mailing address or addresses, and it is important that CARB have an accurate record of where records will be stored for enforcement purposes in case an audit is needed. This change was necessary so that the regulated community understands that a records storage address may not be necessary in all cases.
- 22) In section 2021.3(a)(7), staff added a cross reference to section 2021.3(a)(6). This language was necessary to clarify the engine information is for the same vehicle specified in the prior section.
- 23) In section 2021.3(a)(9)(C), staff combined the first two sentences regarding replacement of an odometer or hubometer. This change was necessary so that the regulated party understands the reporting procedure for replacement of either instrument. Staff also identified that fleet owners may submit information online via TRUCRS or via mail. This modification was necessary to so that the regulated community can be informed of the method to report.
- 24) In section 2021.3(a)(10), staff replaced “during the month of January” with “no earlier than January 1, and no later than January 31.” This change was necessary because reporting for this option is only available January 1st through January 31st. The section provides additional time for a replacement vehicle to be delivered in the event of a manufacturer delay into the next compliance year. Reporting is required in January if the replacement vehicle has not been delivered by January 1 so that the fleet will not be deemed out of compliance. The owner will be allowed to continue operating an otherwise non-compliant vehicle for a period of time until the replacement vehicle is delivered and the fleet will not be deemed out of compliance due to the manufacturer delay. Without reporting at the beginning of the year, there would be no information to determine whether the fleet met the criteria to qualify for additional time due to circumstances beyond their control.
- 25) In section 2021.3(a)(12)(A) staff added “via TRUCRS or mail, pursuant to sections 2021.3(a)(6) through 2021.3 (a)(11).” This was necessary so that the regulated community understands what information is required for reporting newly purchased vehicles for an existing fleet, and how to submit that information.
- 26) Staff removed section 2021.3(a)(12)(D). This language was not necessary because it is implicit that fleet owners that have fallen out of compliance as a result of these amendments or no longer qualify for a compliance extension will need to bring the fleet into compliance.

- 27) In section 2021.3(b)(4) staff added “company or owner name, United States Department of Transportation or California Motor Carrier Permit number, license plate number, and the state of registration,” replacing the proposed language “more information.” This change was necessary for CARB staff to accurately identify the vehicle dispatched.
- 28) In section 2021.3(b)(11), staff added a cross reference to subdivision (a)(5)(F). This was necessary to ensure owners maintain all records at the records storage address previously identified to CARB. This will assist with enforcement in the event an audit of records is deemed necessary.

These modifications do not change implementation of the regulation in any way that affects the conclusions of the environmental analysis included in the Staff Report because the modifications consist primarily of definitional and provision clarifications that do not alter the compliance responses. Therefore, no additional environmental analysis or recirculation of the analysis is required. In addition to the modifications described above, additional modifications correcting grammar, punctuation, spelling, and authority and reference citations have been made throughout the proposed changes. These changes are non-substantive.

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. Additional non-substantial modifications were made during the 15-day comment period which included correcting grammar, punctuation, spelling, and authority and reference citations have been made throughout the proposed changes.

The above described modifications constitute non-substantial changes to the regulatory text because they more accurately reflect the numbering of a section and correct spelling and grammatical errors, but do not materially alter the requirements or conditions of the proposed rulemaking action.

C. NONSUBSTANTIVE CHANGES TO THE TEXT FOLLOWING THE CLOSE OF THE 15-DAY PUBLIC COMMENT PERIOD

- 1) In section 2021.3(a)(4), the language “or forms (paper or electronic)” was deleted from the final regulation text to align with the submittal methods specified in subdivisions (a)(9)(C), (a)(10), (a)(12)(A), and (a)(12)(B) of section 2021.3.
- 2) In section 2021.3(a)(9)(C), the reference to “the replacement” was deleted from the final regulation text to resolve a drafting error.
- 3) The Board also made numerous nonsubstantive revisions to the final regulation text to resolve underline/strikeout errors, fix grammatical errors,

update cross-references, refine authority and reference citations, and align the final regulation text with the existing CCR text.

D. ADDENDUM TO NECESSITY STATEMENTS

- 1) In section 2021(b)(12) and section 2021.3 (c), the statement of factors the Executive Officer will consider when assessing penalties was added in order to align with existing section 2025 (z). The Board has found these factors to be helpful in terms of evaluating penalties to be imposed, and is attempting to maintain consistency with the Board’s other regulatory compliance programs.

- 2) In section 2021.3(a)(4) and section 2021.3(a)(9)(C), (a)(10), (a)(12)(A), (a)(12)(B), in the modified regulation text, the Board added language that specifies the methods of submittal of reporting information. These methods are consistent across the above referenced sections. These methods of submittal were chosen to provide owners with multiple ways to comply with the reporting requirements. The online portal is the easiest and cheapest way to submit the required information. For those who do not have ready access to the internet, a mail option is also provided as an alternative.

III. DOCUMENTS INCORPORATED BY REFERENCE

No new documents were incorporated by reference.

IV. SUMMARY OF COMMENTS AND AGENCY RESPONSES

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

No written comments were submitted during the 15-day comment period that commenced on May 29, 2019, and ended on June 13, 2019.

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 needed 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 NO_x emission benefits and 0.007 tons per day fewer PM_{2.5} emission benefits from heavy cranes but achieves nearly the same PM_{2.5} emissions reductions by 2027 when compared to the 2011 Truck and Bus regulation. For NO_x, 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 approved regulation because ballot measures and income from taxes and fees were not addressed in the approved 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 approved 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.

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.

VI. 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.