

ATTACHMENT B

ANALYSES SUPPORTING THE "SECOND NOTICE OF PUBLIC AVAILABILITY OF MODIFIED TEXT AND AVAILABILITY OF ADDITIONAL DOCUMENTS AND INFORMATION"

THIS DOCUMENT PROVIDES UPDATES TO THE "NOTICE OF PUBLIC AVAILABILITY OF MODIFIED TEXT AND AVAILABILITY OF ADDITIONAL DOCUMENT AND INFORMATION" POSTED MARCH 26, 2020 AND TO THE COSTS IN THE INITIAL STATEMENT OF REASONS (ISOR) CHAPTER IX SUPPORTING THE PROPOSED REGULATION POSTED OCTOBER 15, 2019

July 10, 2020

This is an attachment to the "Notice of Public Availability of Modified Text and Availability of Additional Documents and Information" (Second 15-Day Changes) posted July 10, 2020 related to the Proposed At Berth Regulation. This attachment, is an update to the "Notice of Public Availability of Modified Text and Availability of Additional Document and Information" posted March 26, 2020 (15-Day Changes), and an update to the costs in the Initial Statement of Reasons (ISOR) Chapter IX supporting the Proposed Regulation released October 15, 2019.

SUMMARY OF PROPOSED SECOND 15-DAY CHANGES AND IMPACT ON COSTS:

Summary of the Second 15-Day Changes

This attachment covers changes to the Proposed Regulation (15-Day Changes). The update does not include any changes to the cost or benefits methodologies. The Second 15-Day Changes primarily affect the implementation dates for container, refrigerated cargo (reefer), cruise, and ro-ro vessels, and the Innovative Concept provision.

The changes described below are changes made since the 15-Day Changes were released on March 26, 2020. The changes collectively result in decreased costs to industry and ports. The total net cost of the Proposed Regulation is estimated to decrease to \$2.23 billion from \$2.40 billion in the 15 Day Changes for the period 2021 to 2032. The statewide valuation from avoided adverse health outcomes between 2021 to 2032 has decreased from \$2.44 billion to \$2.32 billion.

- 1) Updated implementation schedule. The updated proposed implementation timeline is summarized in Updated Table 1. Specifically, emissions control requirements for container, reefer and cruise vessels will begin January 1, 2023 instead of 2021. In 2023, the control requirements will include all container, reefer and cruise vessels that visit terminals in California that are above the low activity threshold. Ro-ro vessel requirements begin in 2025 instead of 2024 as proposed in the 15-Day Changes. The result of these changes is fewer emissions reductions in earlier years as some visits are controlled later. This change results in lower costs for vessel and terminal operators from 2021 through 2032.

Updated Table 1 (Second 15-Day Proposal, July 10, 2020): Implementation Timeline for the Proposed Regulation

2023	2025	2027
Container, Reefer, and Cruise		
	Ro-ro	
	Tankers - POLA/POLB* Terminals	
		Tankers – Remaining Statewide Terminals

* Port of Los Angeles (POLA), Port of Long Beach (POLB)

- 2) Updated Terminal Incident Event (TIE) and Vessel Incident Event (VIE) provisions. The percentages of TIEs and VIEs based on the updated implementation dates are shown in Updated Table 2. There were no changes made to the percentage of TIEs and VIEs granted for each vessel fleet or terminal. However, TIEs and VIEs will begin in 2023 to align with the first year of implementation for the container, reefer and cruise vessels. TIEs are maintained from the 15-Day Changes at 15 percent in 2023 and 2024 and maintained at 5 percent in 2025 and later. Ro-ro vessel requirements begin January 1, 2025, with TIEs maintained at 5 percent. VIEs are maintained at 5 percent in 2023 and all years later, for all regulated vessel types. These changes have a minimal impact on total costs and savings to vessel and terminal operators.

Updated Table 2 (Second 15-Day Changes, July 10, 2020): VIEs and TIEs by Vessel Category per Year under the Proposed Regulation

Category		2023 - 2024	2025 – 2026	2027+
TIEs	All Terminals*	15%	5%	5%
VIEs	Container/ Reefer	5%	5%	5%
	Cruise	5%	5%	5%
	Ro-ro	--	5%	5%
	Tankers (POLA/POLB)	--	5%	5%
	Other Tankers	--	--	5%

*All terminals with control requirements.

- 3) Port and terminal plan submission dates. The due dates for the initial terminal and port plans for container, reefer, and cruise terminals have moved from July 1, 2021 to December 1, 2021 as a result of adjusting the implementation date. The due dates for the revised ro-ro terminal plans were moved back one year to February 1, 2024, to provide the same shift as the implementation date to provide for consistency. These changes have no impact on the total cost to terminal operators and ports, but the costs associated with port and terminal plans will be incurred in later years.
- 4) Vessel visit reporting. With the change in the first implementation date to 2023, California Air Resources Board (CARB) staff propose changing the date from 2021 to 2023 to submit vessel visit information by vessel and terminal operators. This change results in lower costs to vessel and terminal operators.

- 5) Innovative Concept provision. CARB staff revised the assumption that the Innovative Concept provision would be used by tanker terminals receiving less than 40 visits to less than 60 visits. This assumption change increases the estimated number of terminals, by three, that would utilize a lower cost Innovative Concept as their compliance mechanism. This change results in reduced estimated costs to the tanker terminal operators and ports compared to installing and using capture and control infrastructure and equipment to control vessel at berth emissions at the terminal. While a range of possible Innovative Concepts could be used to achieve equivalent emissions reductions, CARB staff demonstrated emissions reduction equivalency with a hypothetical Innovative Concept proposal in which four older, higher emitting Tier 1 line haul locomotives are replaced with cleaner Tier 4 locomotives. This assumption change would not negatively impact emissions reductions. This is because an Innovative Concept must reduce emissions that are equivalent (or greater) than would be achieved with reducing emissions from vessels at berth.
- 6) Growth factors. The compounded growth factors used in the ISOR for the capture and control systems costs for container, reefer, and ro-ros, and the vessel retrofit costs for container, reefer, and cruise vessels were inadvertently shifted by a year. For example, for costs in 2020 the compounded growth for 2019 was used. The compounded growth factors were corrected, resulting in slightly higher costs to vessel and terminal operators.
- 7) Updated emissions inventory. Updates to the 2019 CARB Ocean-Going Vessel (OGV) Emissions Inventory, Attachment C, cover changes to the Proposed Regulation in the Second 15-Day Changes, and do not include any other changes to the inventory inputs or methodology. The Proposed Regulatory changes primarily affect the implementation dates for the container, reefer, cruise, and ro-ro vessels as shown in Updated Table 1. Tables and charts detailing the emissions changes for nitrogen oxides (NOx), particulate matter (PM) 2.5, and diesel PM emissions can be found in Attachment C of the Second 15-Day Changes package.
- 8) Updated non-cancer mortality. Total costs for all entities is expected to be about \$2.23 billion through 2032, with a statewide valuation of avoided health impacts valued at \$2.32 billion from 237 fewer premature deaths, 75 fewer hospital admissions, and 122 fewer emergency room visits statewide. More information on the updates to the Health Analysis can be found in Attachment D of the Second 15-Day Changes package.
- 9) Regulation language clarifications and clean up. Staff made numerous changes to the Proposed Regulation language, both substantive and non-substantive. Most substantive changes were made in response to feedback received from CARB's Board during the June 25, 2020 Board Meeting, public comments received during the formal comment period for the 15-Day Changes that began March 26, 2020 and ended May 1, 2020, and internal feedback from CARB legal and enforcement

staff. Substantive changes to the Proposed Regulation include: the addition and clarification of definitions; new or revised language to improve clarity and ensure the regulation functions as staff intend; updates to reporting deadlines for both reporting and recordkeeping; the adjustment of implementation dates for container, reefer, cruise and ro-ro vessels and terminal/port plan submittal dates in response to these changes; remediation fund language to clarify that the remediation fund can be used for a failure of CARB approved emission control systems operators to perform; adjusting the initial approval period for the Innovative Concepts from 3 years to up to 5 years; and date adjustment for the Interim Evaluation. Non-substantive changes include: grammar and spelling corrections, minor wording changes with some added abbreviations to help the document read easier, and also the re-numbering of numerous sections and subsections for clarity and consistency. All changes with impacts to costs have been described above.