

DRAFT REGULATION ORDER

California Code of Regulations, Title 17, Division 3, Chapter 1, Subchapter 7.5, Sections 93130-93134.14

(Note: The entire text of Sections 93130, XXXXX, XXXXX and XXXXX set forth below is new language in “normal type” proposed to be added to title 17, California Code of Regulations.) Adopt new title 17, chapter 1, subchapter 7.5, Sections 93130-93130.14, California Code of Regulations (CCR) Appendix A, Appendix B, and Appendix C, title 17, California Code of Regulations, to read as follows:

Section 93130. Control Measure For Ocean-going Vessels At Berth

The Control Measure for Ocean-going Vessels At Berth is set forth in Sections 93130 through 93130.14, title 17, California Code of Regulations.

On January 1, 2021, the requirements of this Control Measure shall supersede the requirements of Section 93118.3 of title 17 and Section 2299.3 of title 13 of the California Code of Regulations. As specified in proposed Section 93130.15, the individual provisions in this Control Measure are severable. However, if this article is repealed or deemed invalid in its entirety by a final court decision, the requirements of Section 93118.3 of title 17 and Section 2299.3 of title 13 of the California Code of Regulations shall again become operative.

Section 93130.1. Purpose and Intent

The purpose of this Control Measure is to reduce oxides of nitrogen (NO_x), reactive organic gasses (ROG), particulate matter (PM), diesel particulate matter (DPM), and greenhouse gas (GHG) emissions from ocean-going vessels while docked at berth at California ports. California’s ocean-going vessel operations are largely situated in and around at-risk communities that directly benefit by localized reductions of NO_x and PM. This contributes to meeting community health goals set forth AB 617. Furthermore, NO_x and PM emission reductions contribute to meeting California’s State Implementation Plan (SIP) obligations for attainment. Additionally, reductions from shore power have a benefit of reducing greenhouse gas (GHG) emissions. This contributes to meeting California’s GHG emission reduction targets established in Assembly Bill (AB) 32 (Nunez, 2006) and Senate Bill (SB) 32 (Pavley, 2016).

The intent of this Control Measure is to ensure that operators of ocean-going vessels reduce emissions using a California Air Resources Board (CARB) approved emission control strategy to reduce PM, NO_x, and ROG emissions at berth without increasing overall GHG emissions from this Control Measure, and that every ocean-going vessel meets visible emission standards at berth and at anchor. All parties that are necessary to achieving emission reductions from ocean-going vessels at berth have responsibilities and requirements under this

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Control Measure including vessel operators, terminal operators, ports, and operators of emission reduction technologies.

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(b) Definitions

For purposes of this section, the definitions in Health and Safety Code Sections 39010 through 39060 shall apply, except as otherwise specified in this section

- (1) "Alternative Control Technologies" means technologies, techniques, or measures that reduce the emissions of NO_x, PM, ROG, or GHG from an auxiliary engine and/or tanker auxiliary boiler other than shutting it down.
- (2) "Anchorage" means a vessel's allotted place to moor in place or drop anchor in California waters.
- (3) "Auxiliary Engine" means an engine on an ocean-going vessel designed primarily to provide power for uses other than propulsion, except that all diesel-electric engines shall be considered "auxiliary engines".
- (4) "Berth" means a vessel's allotted place at a wharf, pier, or dock.
- (5) "Bulk Vessel" means a self-propelled ocean-going vessel constructed or adapted primarily to carry unpackaged dry bulk cargo. A bulk vessel may use vessel-based or shore-based equipment for loading and discharging of cargo.
- (6) "Calendar Year" means the time period beginning on January 1 through December 31 of a single year.

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- (7) "California Ports (Ports)" means any port or independent marine terminal in California that receives an ocean-going vessel including:
 - (A) landlord ports where the port owns the wharves which it rents or leases to a terminal operator;
 - (B) operational ports where the port functions as a terminal operator; and
 - (C) marine terminals which operates independently of a port.
- (8) "California Voyage" means a vessel's visit to California waters, whether making visits at a single or multiple California ports or marine terminals.
- (9) "CARB Approved Emission Control Strategy" means a method of reducing emissions from an ocean-going vessel at berth to a satisfactory level for compliance with the Control Measure and is verified and approved by CARB.
- (10) "Charter" or "Charter Agreement" means a lease or agreement to hire a vessel or other means of conveyance to transport goods or passengers to one or more designated locations.
- (11) "Commissioned Shore Power Vessel" means a shore power equipped vessel that visits a compatible shore power berth at a terminal and has completed vessel commissioning at that terminal.
- (12) "Container Vessel" means a self-propelled ocean-going vessel constructed or adapted primarily to carry uniformly sized ocean freight containers.
- (13) "Diesel-Electric Engine" means a diesel engine connected to a generator that is used as a source of electricity for propulsion or other uses.
- (14) "Diesel Engine" means an internal combustion, compression-ignition engine with operating characteristics significantly similar to the theoretical diesel combustion cycle. The regulation of power by controlling fuel supply in lieu of a throttle is indicative of a compression ignition engine.
- (15) "Diesel Particulate Matter (DPM)" means the particles found in the exhaust of diesel engines, which may agglomerate and adsorb other species to form structures of complex physical and chemical properties.
- (16) "Distributed Generation" means electrical generation technologies that produce electricity near the place of use.
- (17) "Docked at Berth (at berth)" means the state of being secured to a berth.

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- (18) "Emergency Event" means the period of time during which any of the following events occurs; the emergency event begins when such an event begins and ends when the event is over:
- (A) The utility serving the port or terminal cannot provide electrical power to the port as a result of equipment failure, a transmission emergency, distribution emergency, a California Independent System Operator (CAISO) or Los Angeles Department of Water and Power (LADWP) Stage 3 emergency, or the utility needs to reduce power to the port and/or terminal because of a sudden and reasonably unforeseeable natural disaster, such as, but not limited to, an earthquake, flood, or fire; or
 - (B) When the utility providing electrical power notifies the terminal operator(s) to reduce the use of grid-based electrical power in response to a transmission or distribution emergency, a CAISO or LADWP Stage 3 emergency, or to avoid a Stage 3 emergency if one is anticipated. The emergency event ends when CAISO or LADWP cancels the Stage 3 emergency or the utility notifies the terminal operator(s) that reduction in the use of grid-based electrical power is no longer necessary. The port may contact the terminal operator(s) on behalf of the utility if such an agreement exists between the utility and the port.
- (19) "Emission Control Equipment" means a device that when operated reduces air pollution from an engine or boiler.
- (20) "Executive Officer" means the Executive Officer of CARB, or his or her designee.
- (21) "Exception" means a situation that results in a compliant visit with or without emission reductions.
- (22) "Fleet" means a group of vessels that have agreed to utilize their combined awarded Vessel Incident Exceptions (VIEs) at a port or marine terminal.
- (23) "Foreign-flag vessel" means any vessel of foreign registry including vessels owned by U.S. citizens but registered in a nation other than the United States.
- (24) "General Cargo Vessel" means a self-propelled ocean-going vessel constructed or adapted primarily to carry cargo that must be loaded individually, and may or may not be in uniform-sized ocean freight containers. May use vessel-based or shore-based equipment for loading and discharging of cargo.
- (25) "Greenhouse Gas" (GHG) means carbon dioxide (CO₂), methane (CH₄), nitrogen trifluoride (NF₃), nitrous oxide (N₂O), sulfur

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hexafluoride (SF₆), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and other fluorinated greenhouse gases.

- (26) "Government or Military Vessel" means vessels operated by any branch of local, state, federal government military service, or by a foreign government, when such vessels are operated on government or military non-commercial service. This definition includes Coast Guard vessels. A commercial vessel that also carries some military cargo is not a government or military vessel unless the military is the vessel operator.
- (27) "Independent Marine Terminal" means a terminal that operates independently from a port or port authority. An Independent Marine Terminal has all the responsibilities of a terminal and a port.
- (28) "Intrinsically Safe Systems" as defined in Title 46 CFR Subpart 111.105-11.
- (29) "Low Activity Port" means a port that has not previously exceeded the port thresholds in Section 93130.8(g)(1).
- (30) "Low Activity Terminal" means a terminal that has not previously exceeded the terminal thresholds in Section 93130.8(g)(1).
- (31) "Marine Gas Oil (MGO)" means any fuel that meets all the specifications for DMX or DMA grades as defined in Table I of International Standard ISO 8217, as revised in 2005, which is incorporated herein by reference, or DMX, DMA, or DMZ grades as defined in Table I of International Standard ISO 8217, as revised on June 15, 2010, which is incorporated herein by reference.
- (32) "Master" means the person who operates an ocean-going vessel or is otherwise in charge of the vessel's operations.
- (33) "Malfunction" means any sudden and unavoidable failure to operate in a normal manner by air pollution control equipment, process equipment, or a process that affects emissions.
- (34) "Ocean-going Vessel" means a commercial, government, or military vessel meeting any one of the following criteria:
 - (A) A vessel greater than or equal to 400 feet in length overall as defined in 50 Code of Federal Regulations (CFR) § 679.2, as adopted June 19, 1996;
 - (B) A vessel greater than or equal to 10,000 gross tons pursuant to the convention measurement (international system) as defined in 46 CFR § 69.51-.61, as adopted September 12, 1989; or
 - (C) A vessel propelled by a marine compression ignition engine with a per-cylinder displacement of greater than or equal to 30 liters.

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For the purposes of this Control Measure, “ocean-going vessel” will be used interchangeably with the term “vessel.”

- (35) “Own” means having any of the incidents of ownership, including the legal title whether or not that person lends, or pledges an item; having or being entitled to the possession of the item as the purchaser under a conditional sale contract; or being the mortgagor of an item.
- (36) “Oxides of Nitrogen (NO_x)” means compounds of nitric oxide (NO), nitrogen dioxide (NO₂), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.
- (37) “Particulate Matter (PM)” means any airborne finely divided material, except uncombined water, which exists as a liquid or solid at standard conditions (e.g., dust, smoke, mist, fumes, or smog).
- (38) “Particulate Matter 2.5 (PM_{2.5})” means any particulate matter that have a diameter of less than 2.5 micrometers.
- (39) “Passenger Vessel” means a self-propelled vessel constructed or adapted primarily to carry people.
- (40) “Person” includes all of the following:
 - (A) Any person, agent, firm, association, organization, partnership, business trust, corporation, limited liability company, company, consortium, or any other commercial relationship;
 - (B) Any state or local governmental agency or public district, or any officer or employee thereof; and
 - (C) The United States or its agencies, to the extent authorized by federal law.
- (41) “Physical Constraint” at a terminal means an unavoidable barrier to provide a service due to the layout of a terminal or waterway where in writing, the U.S. Coast Guard has made a safety determination that prevents the use of a CARB approved control strategy.
- (42) “Pilot on Board” means the vessel’s pilot has boarded the vessel to assume navigational control in preparation for vessel departure.
- (43) “Reactive Organic Gases (ROG)” means any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, and excluding exempt compounds.
- (44) “Ready to Work” means that the vessel is tied to the berth, the gangway has been lowered with netting down, and U.S. Coast Guard and U.S. Customs and Border Protection have cleared the vessel.

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- (45) "Refrigerated Cargo Vessel" (commonly known as "reefer") means a self-propelled vessel constructed or adapted primarily to carry refrigerated cargo. Refrigerated cargo vessels include vessels where the cargo may be stored in large refrigerated rooms within the vessel or vessels that primarily carry refrigerated cargo containers.
- (46) "Regulated California Waters" means all of the following:
- (A) All California internal waters;
 - (B) All California estuarine waters;
 - (C) All California ports, roadsteads, and terminal facilities (collectively "ports");
 - (D) All waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;
 - (E) All waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;
 - (F) All waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West; inclusive; and
 - (G) All waters within the area, not including any islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.65 degrees North, 117.81 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.
- (47) "Responsible Official" means the person(s) with the authority to certify that a vessel, terminal, port, or control equipment comply with applicable requirements of this Control Measure.
- (48) "Responsible Party" means any person with an obligation under this Control Measure.
- (49) "Roll-On-Roll-Off Vessel" (commonly known as "Ro-Ro" or "vehicle carrier") means a self-propelled vessel constructed or adapted primarily to carry wheeled cargo that can be rolled on and off. Ro-Ro vessels may carry exclusively automobiles (commonly known as a "pure car carrier") and/or a mixture of bulk equipment on wheels.
- (50) "Selective Catalytic Reduction (SCR)" means an emission control system that reduces NO_x emissions through the catalytic reduction of NO_x in diesel exhaust by injecting nitrogen-containing compounds into the exhaust stream, such as ammonia or urea.

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- (51) "Shore Power" refers to electrical power being provided by either the local utility or by distributed generation.
- (52) "Tanker Auxiliary Boiler" means a steam generator on a tanker vessel which is used to offload liquid product.
- (53) "Tanker Vessel" means a self-propelled vessel constructed or adapted primarily to carry liquid bulk cargo. Tanker vessels may carry petroleum crude, petroleum products, or non-petroleum based products, and are classified as either non-edible and dangerous or edible and non-dangerous.
- (54) "Terminal" means a facility consisting of wharves, piers, docks and other berthing locations and adjacent storage, which are used primarily for loading and unloading of passengers, cargo or material from vessels or for the temporary storage of this cargo or material on-site.
- (55) "Terminal Incident Exception (TIE)" is an exception provided to terminal operators.
- (56) "Terminal Operator" means a person who leases terminal property from a port for the purpose of loading and unloading of passengers, cargo or material from vessels or for the temporary storage of this cargo or material on-site. For operational ports that use a single berth to service an individual customer, the port is the terminal operator and the customer's berth is a terminal.
- (57) "This Control Measure" means the Control Measure for Ocean-Going Vessels At Berth, California Code of Regulations, title 17, Sections 93130-93130.16.
- (58) "Utility" shall have the same meaning and be used interchangeably with the term "Electric Utility" as defined in Public Resources Code Section 25108.
- (59) "U.S.-flag vessel" when used independently means either a Government vessel or a privately owned U.S.-flag commercial vessel.
- (60) "Vessel Arrival" means the date and time that a vessel is initially tied to a berth with first line.
- (61) "Vessel Commissioning" means the process that is undertaken by the vessel operator and terminal operator to ensure that the shore power equipment on the vessel is compatible with the shore power equipment on the terminal and that there are no safety issues for both the equipment and the personnel handling the connection.
- (62) "Vessel Departure" means the date and time that a vessel casts off the last line.

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- (63) "Vessel Incident Exception (VIE)" is an exception provided to vessel fleets.
 - (64) "Vessel Operator" means any party who makes decisions of where a vessel is to call or who is in direct control of the vessel. For the purposes of this definition, the party in direct control of the vessel may be a third-party hired to carry cargo or passengers for the person pursuant to a charter agreement to operate the vessel. Direct control does not include the vessel master or any other member of the vessel crew, unless the crew member is also the owner of the vessel. An operator may or may not be the owner of the vessel.
 - (65) "Vessel Owner" means any party who has a financial ownership of the vessel. The owner may be an individual or multiple parties. The owner may or may not be the operator of the vessel.
 - (66) "Visit" means the time period when the vessel is "Ready to Work". The visit begins once the vessel is tied to the berth with gangway down and netting secured and has been cleared by U.S. Customs and Border Protection. The visit ends when "Pilot on Board".
- (c) Acronyms
- (1) AB: Assembly Bill
 - (2) ACT: Alternative Control Technology
 - (3) CAISO: California Independent System Operator
 - (4) CARB: California Air Resources Board
 - (5) CFR: Code of Federal Regulation
 - (6) CO₂: Carbon Dioxide
 - (7) DPM: Diesel Particulate Matter
 - (8) EO: CARB Executive Officer
 - (9) g/kW-hr: Gram per Kilowatt Hour
 - (10) GHG: Greenhouse Gas
 - (11) IMO: International Maritime Organization
 - (12) ISO: International Organization for Standardization
 - (13) LADWP: Los Angeles Department of Water and Power
 - (14) LA/LB: Port of Los Angeles and Port of Long Beach
 - (15) MGO: Marine Gas Oil
 - (16) NO_x: Oxides of Nitrogen
 - (17) PM: Particulate Matter
 - (18) PM_{2.5}: Particulate Matter 2.5

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- (19) ppm_{dv}: Part per million by dry volume
- (20) Ro-Ro: Roll-On-Roll-Off Vessel
- (21) ROG: Reactive Organic Compounds
- (22) SB: Senate Bill
- (23) SCR: Selective Catalytic Reduction
- (24) SIP: State Implementation Plan
- (25) SP: Shore Power
- (26) TIE: Terminal Incident Exception
- (27) U.S.: United States
- (28) VIE: Vessel Incident Exception
- (29) VOC: Volatile Organic Compound

Section 93130.3. Applicability

(a) General applicability

Except as provided in Section 93130.4 General Exceptions, this Control Measure applies to

- (1) any person who owns, operates, charters, or leases any U.S. or foreign-flag ocean-going vessel that visits a California port, terminal or berth;
- (2) any person who owns, operates, or leases a port, terminal or berth located where ocean-going vessels visit; and
- (3) any person who owns, operates, or leases CARB approved emission control equipment for ocean-going vessel auxiliary engines or tanker auxiliary boilers.

(b) Federal requirements

Nothing in this Control Measure shall be construed to amend, repeal, modify, or change in any way any applicable federal regulations, including any U.S. Coast Guard regulations or requirements. Any person subject to this Control Measure shall be responsible for ensuring compliance with both federal regulations (including any U.S. Coast Guard regulations) and the requirements of this Control Measure, including but not limited to, where applicable, obtaining any necessary approvals, exceptions, or orders from the U.S. Coast Guard. To the extent any requirements in this Control Measure conflict with any applicable federal regulation, the requirements of the federal regulation shall prevail.

Section 93130.4. General Exceptions

The requirements of this Control Measure do not apply to:

- (a) Ocean-going vessel voyages that do not stop at a regulated California port, terminal, or berth

This includes:

- (1) Stopping and anchoring required by the U.S. Coast Guard;
- (2) Stopping that is necessary by force majeure or distress; or
- (3) A stop that is made for the sole purpose of rendering assistance to persons, vessel, or aircraft in danger or distress.

This exception does not apply to the passage of an ocean-going vessel that engages in any of the prejudicial activities specified in United Nations Convention on the Law of the Seas 1982, Article 19, subpart 2 in Regulated California Waters during the voyage.

The requirements of this Control Measure apply to a vessel that was otherwise scheduled or intended to call at a port or terminal facility for any reasons other than the three enumerated reasons listed in this subsection.

- (b) Government and military vessels

The requirements of this Control Measure do not apply to government or military vessels. However, government or military vessels are encouraged to act in a manner consistent, so far as is reasonable and practicable, with this section.

Section 93130.5. CARB Approved Emission Control Strategy

CARB is responsible for approving strategies and issuing compliance instructions for each strategy once approved. The compliance instructions for each reduction strategy include requirements that each responsible party must follow. Unless subject to a general exception (Section 93130.4) or using a Vessel Incident Exception (VIE) (Section 93130.7(g)) or Terminal Incident Exception (TIE) (Section 93130.8(h)) set forth in this Control Measure, all vessel visits must reduce emissions with a CARB approved emission control strategy.

- (a) Shore power is a CARB approved emission control strategy.
- (b) CARB approved emission control strategy requirements
 - (1) A CARB approved emission controls strategy must demonstrate emission reductions that achieve emission rates less than 2.8 g/kW-hr for NO_x, 0.03 g/kW-hr for PM_{2.5}, and 0.1 g/kW-hr for ROG for auxiliary

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engines or a reduction of at least 80 percent in emissions of NO_x, PM_{2.5}, and ROG. Additionally, a strategy's GHG emissions must be grid-neutral, emitting no more carbon emissions than if the strategy were powered by the California grid for the year that the technology is granted an Executive Order.

- (2) For tanker vessels, unless the tanker is using shore power to reduce emissions from auxiliary engines, tankers with steam driven pumps must also use a CARB approved emission control strategy that achieves emission rates less than 0.4 g/kW-hr for NO_x, 0.03 g/kW-hr for PM_{2.5}, and 0.02 g/kW-hr for ROG for tanker auxiliary boilers or a reduction of at least 80 percent in emissions of NO_x, PM_{2.5}, and ROG.
- (3) Default emission rates of auxiliary engines on ocean-going vessels are 13.8 g/kW-hr for NO_x, 0.17 g/kW-hr for PM_{2.5}, and 0.52 g/kW-hr for ROG. Default emission rates of tanker auxiliary boilers on ocean-going vessels are 2.0 g/kW-hr for NO_x, 0.17 g/kW-hr for PM_{2.5}, and 0.11 g/kW-hr for ROG. These emission rates represent a typical vessel operating on marine diesel oil with a sulfur content of 0.10 percent.
- (4) Additional criteria for CARB approval
 - (A) A CARB approved emission control strategy utilizing SCR shall have ammonia emissions no greater than 10 ppm_{dv}.
 - (B) After the Executive Officer grants verification of a CARB approved emission control strategy, the applicant must provide a warranty as set forth in subsection (C) below, conduct in-use compliance testing of the strategy after having sold or leased a units, and report the results to the Executive Officer.
 - (C) The manufacturer of each emission control strategy shall warrant for X years to the ultimate purchaser and each subsequent purchaser that the strategy is:
 - i. Designed, built, and equipped to conform, at the time of sale, with this Control Measure pursuant to its authority in chapters 1 and 2, part 5, division 26 of the Health and Safety Code; and
 - ii. Free from defects in materials and workmanship which cause the failure of a warranted part to no longer be identical in all material respects to that part as described in the manufacturer's application for certification.
 - (D) The owner of the CARB approved emission control strategy system is required to adhere to all maintenance practices. Failure to document proper maintenance, including keeping records of emissions control numbers, may be grounds for

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denial of a warranty claim and may expose such an owner to penalty liability if equipment failure occurs.

- (E) The applicant of a CARB approved control strategy must demonstrate, to the satisfaction of the Executive Officer, the durability of the applicant's emission control strategy through an actual field demonstration. If the applicant has demonstrated the durability of the identical strategy in a prior verification or has demonstrated durability through field experience, the applicant may request that the Executive Officer accept the previous demonstration in fulfillment of this requirement. In evaluating such a request, the Executive Officer may consider all relevant information including, but not limited to, the similarity of baseline emissions and application duty cycles, the relationship between the emission control group used in previous testing and the current emission control group, the number of engines tested, evidence of successful operation and user acceptance, and published reports.
- (F) Application fees
 - i. Fees shall be due and payable to the Executive Officer at the time an application is filed.
 - ii. Technology manufacturers will be assessed a fee of [\$XXX] for each certification.
 - iii. Technology manufacturers will be assessed a recertification fee of [\$XXX] for an extension.

(c) Overview of the application process

Before submitting an application for a CARB approved emission control strategy, the applicant must submit a test plan to the Executive Officer for conducting the emissions reduction testing, durability testing, and a timeline for testing. After the applicant receives CARB approval for the test plan, the applicant shall submit an application including all source test data. If the application is approved, the applicant's strategy will be considered a CARB approved emission control strategy and shall become a compliance option for vessel visits when used in a manner that is consistent with all the conditions of the approval.

(d) Test plan requirements

- (1) A test plan must include:
 - (A) Identification of the contact persons, phone numbers, names and addresses of responsible party submitting the test plan.
 - (B) Description of the emission control strategy's principles of operation. A schematic depiction of the components and

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operation must be included. It is the responsibility of the applicant to demonstrate that the qualifying strategy relies on sound principles of science and engineering to achieve emission reductions.

- (C) Description of testing to be conducted to demonstrate emission reductions and durability.
 - (D) Timeline for all emissions reduction testing and durability testing including an estimate for the duration of testing and the number of vessel visits needed to complete proposed testing.
- (2) If, after reviewing the test plan, the Executive Officer determines that the applicant has not made a satisfactory demonstration that its strategy relies on sound principles of science and engineering to achieve emission reductions at the rates required for certification or if the test plan is incomplete, the Executive Officer shall notify the applicant of the disapproval in writing within 30 calendar days of receiving the test plan. The applicant may choose to withdraw from the application process or submit additional materials and clarifications.
- (3) Upon determining the test plan is satisfactory, the Executive Officer shall issue a test plan approval letter to the applicant within 45 calendar days.
- (e) Source testing

Source testing shall be used to demonstrate that a proposed emission control strategy achieves the performance standards in Section 93130.5. Testing must be done by a third party specified in the test plan and approved in writing by CARB. Alternative test methods or emission verifications may be used upon written approval from the Executive Officer. The following requirements shall apply to source testing conducted under this Control Measure.

- (1) NO_x, CO₂ and Diesel PM shall be measured using ISO 8178 Test Procedures: ISO 8178-1: 1996(E) ("ISO 8178 Part 1"); ISO 8178-2:1996(E) ("ISO 8178 Part 2"); and ISO 8178-4: 1996(E) ("ISO 8178 Part 4"), respectively all of which are incorporated herein by reference;
- (2) [Placeholder for PM_{2.5}, ROG/VOC test method]
- (3) Ammonia slip shall be measured using the Bay Area Air Quality Management District Source Test Procedure ST-1B, Ammonia Integrated Sampling, dated January 1982, which is incorporated herein by reference, or other equivalent district approved test method; and

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- (4) The sulfur content of fuels shall be determined pursuant to International Standard ISO 8754 (as adopted in 2003), which is incorporated herein by reference.
- (f) Application
 - (1) All applications, correspondence, and reports relating to source testing must be submitted to CARB or in writing to:
CHIEF, TRANSPORTATION AND TOXICS DIVISION
CALIFORNIA AIR RESOURCES BOARD
1001 I STREET
SACRAMENTO, CA 95814
 - (2) Verbal submissions do not constitute acceptable application formats.
 - (3) Supporting data in electronic format may be accepted as part of the application at the discretion of the Executive Officer.
 - (4) Applications must follow the format described in CARB's Recommended Emissions Testing Guidelines for Ocean-going Vessels (dated June 20, 2012), which is incorporated herein by reference.
 - (5) If available, CARB may also allow electronic or e-mail submittal with instructions on the CARB website.
 - (6) The Executive Officer shall determine whether the application is complete. If incomplete, the Executive Officer will notify applicant within 30 calendar days requesting additional information required to complete the application.
- (g) CARB approval of the test plan

Within 90 calendar days after an application has been deemed complete, the Executive Officer shall act to approve or disapprove the application. The Executive Officer shall notify the applicant of the decision in writing and identify any terms and conditions that are necessary to use the CARB approved emission control strategy. The approval of a CARB approved emission control strategy is valid for 5 years. No less than 1 year before expiration, the applicant must apply to extend the approval, if the applicant wishes to extend it, as set forth below.

- (1) Extensions of CARB approved emission control strategy

If the applicant wishes to extend an approval of a CARB approved emission control strategy, it may apply to do so within 1 year of the end of the approval. The applicant may apply for an extension using the original test data, additional test data, engineering justification and analysis, and any other information deemed necessary by the Executive

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Officer to demonstrate that the strategy has not changed and is still effective.

(2) Modifications to a CARB approved emission control strategy

Proposed modifications to the design or operation of a CARB approved emission control strategy must be reviewed by the Executive Officer before they are implemented. Failure to obtain Executive Officer approval before modifying the design or operation of a CARB approved emission control strategy is a violation, and may also be ground for revocation of CARB's approval, as set forth in subsection (g)(3) below. The applicant must provide a detailed description of the design modification along with an explanation of how the modification will change the operation and performance of the strategy. To support its claims, the applicant must submit additional test data, engineering justification and analysis, or any other information deemed necessary by the Executive Officer to address the differences between the modified and original designs, and to ensure that the strategy's reductions are maintained. A modification includes, but is not limited to:

- (A) Any change of materials or specifications to the control strategy;
- (B) Any change to the component design, composition, or reagent usage;
- (C) Any change to the sensors, part sizes, or sizing methodology;
- (D) Any change to the monitoring and notification system control; logic, algorithms, operating parameters; or
- (E) Any change to a portion of the approval.

The Executive Officer will reissue the approval with updates to reflect the modifications if he or she determines that the modifications have no material effect on the control strategy, or if the modifications are found to affect the control strategy but the strategy's emission reductions still meet the requirements of the Control Measure set forth in section 93130.5(b).

(3) Revoking a CARB approved emission control strategy

If an applicant modifies the design or operation of a CARB approved emission control strategy without review and approval, the Executive Officer may revoke its approval of the strategy. In order to resume compliance using the strategy, the applicant must re-submit an application and receive a new approval.

(h) Review of CARB approved emission control strategy

At a minimum, emission control technologies shall be tested as follows and the results of such testing provided to the Executive Officer annually:

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- (1) Shore and barge-based systems shall be tested after every XXX hours of operation to demonstrate the overall percentage of emission reduction being achieved.
- (2) Catalyst based air pollution control systems installed on vessels shall be tested after every XXX hours of operation to determine the overall percentage of emission reduction being achieved.
- (3) If SCR is used as a control technology, the emissions of ammonia shall also be measured at the same time the NO_x emissions are being measured.

The Executive Officer may modify the testing frequency as he or she deems appropriate.

The Executive Officer may request that the owner or operator of a CARB approved emission control strategy conduct periodic emission source testing or other types of monitoring to verify the proper operation of alternative control technologies or distributed generation equipment, or to verify the emission rate of an auxiliary engine.

Section 93130.6. Ocean-going Vessel Opacity Requirement

Consistent with HSC 41701, all ocean-going vessels visiting a California port or terminal or at anchorage in California waters shall not discharge or cause the discharge into the atmosphere of visible emissions exceeding Ringelmann 2 (equivalent to 40% opacity) based on an average of 24 consecutive readings from any operation on the vessel using The United States Environmental Protection Agency Opacity Test Method 9 (40 CFR Pt. 60, App. A-4, effective October 31, 2016), which is incorporated herein by reference.

Section 93130.7. Ocean-going Vessel Operator Requirements

Vessel operators that visit a terminal in California must meet the following requirements.

- (a) Shore power preference for at berth emission reductions
 - (1) Vessel operators are required to use shore power for each visit to a shore power berth if they operate an ocean-going vessel with commissioned shore power equipment.
 - (2) It is the responsibility of vessel operators of an ocean-going vessel with shore power to ensure the vessel's shore power is compatible with the shore power equipment at a terminal's berth.
- (b) Specific requirements for vessel categories
 - (1) Container and refrigerated cargo vessels

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- (A) Beginning January 1, 2021, all container and refrigerated cargo vessel visits must reduce auxiliary engine emissions through a CARB approved emission control strategy as specified in Section 93130.5 unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.7(f)).
- (2) Passenger vessels
 - (A) Beginning January 1, 2021, all passenger vessel visits must reduce auxiliary engine emissions through a CARB approved emission control strategy as specified in Section 93130.5 unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.7(f)).
- (3) Roll-on roll-off vessels
 - (A) Beginning January 1, 2025, all Ro-Ro vessel visits must reduce auxiliary engine emissions through a CARB approved emission control strategy as specified in Section 93130.5 unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.7(f)).
- (4) Tanker vessels
 - (A) Beginning January 1, 2027, all tanker vessel visits to the ports of Los Angeles and Long Beach must reduce auxiliary engine emissions through a CARB approved emission control strategy as specified in Section 93130.5 unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.7(f)).
 - (B) Beginning January 1, 2029, all tanker vessel visits must reduce auxiliary engine emissions through a CARB approved emission control strategy as specified in Section 93130.5 unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.7(f)).
- (5) Tanker vessels with tanker auxiliary boilers

In addition to the auxiliary engine reduction requirements for all tankers, tanker vessels with steam driven product pumps are required to reduce their tanker auxiliary boiler emissions unless the vessel uses shore power to control auxiliary engine emissions.

 - (A) Beginning January 1, 2027, all tanker vessels using steam driven product pumps that visit Los Angeles or Long Beach must reduce tanker auxiliary boiler emissions through a CARB approved emission control strategy as specified in Section 93130.5 unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.7(f)).

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- (B) Beginning January 1, 2029, all tanker vessels using steam driven product pumps that visit must reduce tanker auxiliary boiler emissions through a CARB approved emission control strategy as specified in Section 93130.5 unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.7(f)).

- (c) Interim evaluation for tanker and Ro-Ro technology

CARB staff will assess the progress made in adopting control technologies for use with tanker and Ro-Ro vessels, as well as the status of landside infrastructure improvements that may be needed to support emission reductions at tanker terminals. By July 1, 2023, staff will publish analysis and findings in a report and make it available for public review at least 30 calendar days prior to presenting the report to the Board at a public meeting. If staff finds that the compliance deadlines for Ro-Ro or tanker vessels need to be extended, the report will include recommendations to initiate formal regulatory amendments.

- (d) Vessel compliance checklists

At least 7 calendar days before arrival, the vessel operator must communicate with the terminal operator to coordinate the use of a CARB approved emission control strategy. The vessel operator must supply the terminal operator with information about the compatibility of the vessel with the intended CARB approved emission control strategy. If the terminal operator is not the operator of the CARB approved emission control strategy, the vessel operator must also coordinate with the operator of the CARB approved emission control strategy.

CARB provides a checklist for compliance for each vessel visit. Each item of the checklist is a requirement under the Control Measure. Completing all items in the checklist ensures compliance under the Control Measure.

- (1) Shore power vessel visit checklist:
- Communicate with terminal operator to coordinate use of shore power or to plan commissioning visit.
 - If applicable, commission vessel as required by terminal operator.
 - Perform necessary vessel side activities to facilitate shore power hook-up.
 - Turn off engines within 1 hour of vessel's "Ready to Work" status.
 - Keep engines off and shore power plugged in until at least 1 hour prior to "Pilot on Board".
 - Disconnect from shore power.

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- Report vessel visit information within 7 calendar days of departure.
- (2) CARB approved control strategies vessel visit checklist:
 - Communicate with terminal about strategy being used for visit.
 - Communicate with alternative control strategy operator and arrange for control system reservation.
 - If applicable, commission vessel as required by alternative control strategy operator.
 - Arrange for CARB approved system to be in operation within 1 hour of vessel's "Ready to Work" status.
 - Comply with CARB approved control strategies system requirements for the duration of vessel visit.
 - Continue use of alternative until at least 1 hour prior to "Pilot on Board".
 - Report vessel visit within 7 calendar days of vessel departure.
- (e) Reporting vessel at berth visit information

(1) General visit information

Within 7 calendar days of a vessel's departure from a California berth, the vessel operator must report the following general visit information to CARB in a format acceptable to CARB.

- (A) Vessel name
- (B) Vessel IMO number
- (C) Vessel type
- (D) Vessel operator contact information
- (E) Vessel's fleet operator
- (F) Port, terminal and berth visited
- (G) Date and time of vessel arrival
- (H) Date and time of vessel departure

A vessel shift to another berth must be reported as a separate visit.

(2) Visit information when using a CARB approved emission control strategy

In addition to reporting general visit information, within 7 calendar days of a vessel's departure from a California berth, for all vessels that use a CARB approved emission control strategy during their visits the vessel operator must report the following information to CARB.

- (A) Type of CARB approved emission control strategy used

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- (B) Date and time when vessel has been declared as “Ready to Work”
 - (C) Dates and times when a CARB approved emission control strategy starts controlling emissions and finishes controlling emissions. For shore power, this is the time from when the auxiliary engine(s) is shut off to when the auxiliary engines(s) is started up again.
 - (D) Type of fuel used in auxiliary engine(s)
 - (E) Sulfur content of fuel used in auxiliary engine(s)
 - (F) Amount of fuel used in auxiliary engine(s) during vessel visit
 - (G) For vessels with tanker auxiliary boilers:
 - i. Type of fuel used in tanker auxiliary boiler(s)
 - ii. Sulfur content of fuel used in tanker auxiliary boiler(s)
 - iii. Amount of fuel used in the tanker auxiliary boiler(s) during visit
 - (H) Date and time pilot on-board in preparation for departure
- (3) Information if a vessel uses an exception
- Within 7 calendar days of a vessel’s departure from a California berth, the vessel operator must report the following general visit information to CARB.
- (A) Detailed description of the exception and documentation detailing the exception
 - (B) Any relevant correspondence (e.g. emails) documenting the visit exception
- (4) All information reported must be in English, accurate and complete, and signed by the responsible official. Any information missing or misreported will be subject to enforcement actions as defined in Section 93130.14 Violations.
- (5) In addition to reporting general visit information, each CARB approved emission control strategy may include reporting requirements for strategy specific visit information.
- (f) Vessel visit exceptions

The following is a list of exceptions that may apply to a vessel operator’s visit. Vessel visit exceptions apply only for the duration of the specific conditions of the exception. Vessel operators are still required to report their general visit information (Section 9313076(e)(1)) and information for visits where an exception was utilized (Sections 93130.7(e)(3)).

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(1) Vessel safety and emergency event

The requirements of this Control Measure do not apply during a portion of the visit if the vessel's master reasonably determines that compliance with this section during the visit would endanger the safety of the vessel, its crew, its cargo or its passengers because of severe weather conditions, emergency event or other extraordinary reasons beyond the master's reasonable control. This exception applies only as long as and to the extent necessary to secure the safety of the vessel, its crew, its cargo, or its passengers and provided that the master:

- (A) Takes all reasonable precautions after the conditions necessitating the exception have ended to avoid or minimize repeated claims of exception under this subsection; and
- (B) Submit information for exception to the Executive Officer, within 7 calendar days after the end of the event in a format approved by CARB or in writing to:

CHIEF, TRANSPORTATION AND TOXICS DIVISION
CALIFORNIA AIR RESOURCES BOARD
1001 I STREET
SACRAMENTO, CA 95814

- (C) Submittal must include all documentation necessary to establish the conditions necessitating the safety exception and the date(s), local time, and location. All required documentation must be in English.
- (D) If available, CARB may also allow electronic or e-mail submittal with instructions on the CARB website.

(2) Vessel commissioning

CARB provides an exception for commissioning visits made by a vessel to a terminal as long as the vessel was able to successfully connect to shore power during that visit. An unsuccessful commissioning does not qualify for a vessel visit exception but may qualify for remediation (Section 93130.12) if it is due to an equipment failure that needs to be repaired.

(3) Research

In order to assist with testing new alternative control technologies, vessel visits that participate in testing of an alternative technology may be excluded from the shore power preference provision in Section 93130.7(a) and the at berth emission reduction requirements in Section 93130.7(b). Research visits are still subject to the reporting visit information requirements. To qualify for the research exception, the following conditions apply:

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- (A) The alternative technology must have a CARB approved test plan prior to arrival;
- (B) The testing must be conducted in accordance with the approved test plan; and
- (C) A copy of the approved test plan must be kept on the vessel and provided to CARB staff upon request.

(4) Vessels visiting a low activity terminal or port

The specific requirements for vessel categories in Section 93130.7(b) do not apply to vessel visits to a low activity terminals or ports as specified in (Section 93130.8(g)(1)).

(g) Vessel Incident Exception (VIE)

A vessel incident exception (VIE) accommodates a limited number of situations where a vessel does not reduce emissions during a visit. CARB will grant VIEs to vessel fleets as a percentage of visits to a California port during the previous year. At the beginning of each year, the number of VIEs is determined and each fleet is informed of their VIEs by CARB staff. The fleet operator will be able to assign a VIE to a visit made by vessels in the fleet.

[CARB is still developing timing of assigning VIEs (and TIEs). Conceptually CARB must have enough time to calculate VIEs before granting. VIEs are intended to be used within a year, but CARB is considering a few months grace period to bridge gap between counting VIEs and granting VIEs. Considering granting VIEs mid year.]

(1) Granting VIE

The fleet operator that is designated in a vessel's visit report will be granted VIEs based on a percentage of fleet vessel visits to a California port between January 1 and December 31 in the previous year. At the beginning of each year when VIEs are granted, the number of VIEs is rounded to the nearest whole number.

- (A) VIE rates for container, refrigerated cargo, and passenger vessels
 - i. In 2021 and 2022, container, refrigerated cargo, and passenger vessel fleets will receive 5% of their previous year visits as VIEs.
 - ii. In 2023 and thereafter, container, refrigerated cargo, and passenger vessel visits will receive 3% of their previous year visits as VIEs.

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(B) VIE rates for Ro-Ro vessels

- i. In 2025, Ro-Ro vessel fleets will receive 5% of their previous year visits as VIEs.
- ii. In 2026 and thereafter, Ro-Ro vessel fleets will receive 3% of their previous year visits as VIEs.

(C) VIE rates for LA/LB tanker vessels

- i. In 2027, LA/LB tanker vessel fleets will receive 5% of their previous year visits as VIEs.
- ii. In 2028 and thereafter, LA/LB tanker vessel fleets will receive 3% of their previous year visits as VIEs.

(D) VIE rates for non-LA/LB tanker vessels

- i. In 2029, non-LA/LB tanker vessel fleets will receive 5% of their previous year visits as VIEs.
- ii. In 2030 and thereafter, non-LA/LB tanker fleets will receive 3% of their previous year visits as VIEs.

(E) Summary table of VIE usage rates

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030+
Container, Reefer, Passenger	5%		3%							
Ro-Ro					5%	3%				
LA/LB Only Tankers							5%	3%		
Non-LA/LB Tankers									5%	3%

(2) Expiring VIEs

VIEs expire on XXX of the year after they are granted. They can only be used at the port they are granted.

For example, a container fleet that makes 100 visits to LA/LB in 2020 will be granted 5 VIEs on January 1, 2021. The 5 VIEs can be used from January 1, 2021 to XXX, 2022. On XXX, 2022, any unused VIEs from 2021 will expire. If this fleet makes 60 visits to Port of Oakland, the fleet will also receive 3 VIEs separately for use at Oakland.

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(3) Retiring VIEs

Fleet operators must report the use of a VIE prior to the vessel departure. Once CARB is notified by the fleet operator for a vessel's use of a VIE, that VIE is deducted from the fleets total number of VIEs.

VIEs are limited in number. Because of the limited number of VIEs available, it is anticipated that VIEs will be used for infrequent situations listed in Section 93130.13.

Section 93130.8. Terminal Operator Requirements

Terminals not excluded due to terminal thresholds found under Section 93130.8(g) Terminal Exceptions, are responsible for equipping their berths with a CARB approved emission control strategy and connecting the vessel to the control strategy.

(a) Shore power preference for at berth emission reductions

- (1) Operators of terminals with berths that are equipped to receive shore power vessels must connect shore power when visited by a commissioned shore power vessel.
- (2) It is the terminal operator's responsibility to shift a vessel to shore power if shore power was previously unavailable but becomes available at a berth.
- (3) If the commissioned shore power vessel is berthed such that it cannot connect to shore power, the terminal must provide an alternative CARB approved emission control strategy.
- (4) It is the terminal operator's responsibility to commission vessels equipped with shore power. If a terminal is only capable of receiving vessels in one direction, the terminal is only responsible for commissioning vessels that are equipped with shore power on the berthing side. Vessels without shore power on the berth's side are not compatible with that terminal's berth unless the terminal is capable of receiving vessels both port and starboard side.

(b) Visits by vessels without commissioned shore power or other onboard control strategies

If the terminal has shore power, the terminal is not responsible for arranging a CARB approved emission control strategy for this visit. If neither the vessel nor the terminal has shore power, then it is the shared responsibility of both parties to arrange a CARB approved emission control strategy for this visit.

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(c) Visits by vessels with onboard control strategies

If the CARB approved emission control strategy is operated solely on the vessel, terminal operators are required to confirm with vessel operators that the equipment is operational and will be used, prior to the vessel's arrival at a California berth.

(d) Terminal compliance checklist

At least 7 calendar days before arrival, the terminal operator must communicate with the vessel operator to coordinate the use of a CARB approved emission control strategy. The terminal operator must supply the vessel operator with information about the compatibility of the terminal with the intended CARB approved emission control strategy. If the terminal operator is not the operator of the CARB approved emission control strategy, the terminal operator must also coordinate with the operator of the CARB approved emission control strategy.

CARB provides a checklist for compliance for each vessel visit. Each item of the checklist are requirements under the Control Measure. Completing all items in the checklist ensures compliance under the Control Measure and failure to do any of the specific items will result in a separate violation.

(1) Shore power terminal operator checklist

- Communicate with vessel to determine shore power usage
- If applicable, commission vessel for shore power use
- Position vessel for use of shore power
- Plug in vessel within 1 hour of vessel "Ready to Work"
- Record power meter reading at start of energizing
- Disconnect shore power no more than 1 hour before "Pilot on Board"
- Record power meter reading at disconnect
- Report vessel visit within 7 calendar days of vessel departure

(2) CARB approved emission control strategy terminal operator checklist

- Prior to vessel arrival communicate and confirm with vessel operator the selection of a CARB approved emission control strategy
- Communicate with operator of CARB approved emission control strategy and any necessary entities on the terminal to ensure all parties are ready and available during vessels visit to coordinate controlling emissions on the vessel
- Confirm strategy is CARB approved and report strategy used

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- Report vessel visit within 7 calendar days of vessel departure

(e) Terminal reporting requirements

(1) General visit information

Within 7 calendar days of a vessel's departure from a California berth, the terminal operator must report the vessel's visit information to CARB.

- (A) Vessel name
- (B) Vessel IMO number
- (C) Port, terminal and berth visited
- (D) Terminal operator contact information
- (E) Arrival date and time
- (F) Departure date and time

(2) Compliant visits information

For all visits by vessels that use a CARB approved emission control strategy during their visits, within 7 calendar days of a vessel's departure from a California berth, the terminal operator must report the following information to CARB:

- (A) CARB approved emission control strategy used;
- (B) If CARB approved emission control strategy was provided by the terminal, start and end time of emission control; and
- (C) For shore power visits, the terminal must report the power meter readings at the time of shore power connection and disconnection.

(3) All information reported must be accurate and complete, and signed by the responsible official. Any information missing or misreported will be subject to enforcement actions in Section 93130.14.

(4) In addition to reporting general visit information, each CARB approved emission control strategy may include reporting requirements for strategy specific visit information as specified in CARB's Executive Order.

(f) Construction or repair

The terminal operator is responsible for finding an available alternative CARB approved control strategy for vessels to reduce emissions if the emission control equipment on the berth is unavailable due to construction or repair. If an alternative CARB approved control strategy is not used, the terminal may use a Terminal Incident Exception (Section 93130.8(h)) or remediation (Section 93130.12).

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(g) Terminal exceptions

(1) Vessel visits to a low activity terminal or port

Vessel Type	Annual Terminal Threshold	Annual Port Threshold
Container and Refrigerated Cargo	25	50
Tanker	5	25
Passenger	5	25
Roll-on Roll-off	25	50

- (A) A terminal that receives more visits than the annual terminal threshold for two consecutive calendar years will no longer qualify for this terminal exception.
- (B) A port that receives more visits than the annual port threshold for two consecutive calendar years will no longer qualify for this port exemption

(2) Terminal safety and emergency events

The requirements of this Control Measure do not apply during a visit if the terminal operator, or port reasonably determines that compliance with this section would endanger the safety of the terminal, or its staff because of severe weather conditions, emergency event, or other extraordinary reasons beyond the terminal’s reasonable control. This exception applies only as long as and to the extent necessary to secure terminal provided that the terminal operator:

- (A) Takes all reasonable precautions after the conditions necessitating the exception have ended to avoid or minimize repeated claims of exception under this subsection; and
- (B) Submits request for exception to the Executive Officer, within 7 calendar days after the end of the event to:
 CHIEF, TRANSPORTATION AND TOXICS DIVISION
 CALIFORNIA AIR RESOURCES BOARD
 1001 I STREET
 SACRAMENTO, CA 95814
- (C) Submittal must include all documentation necessary to establish the conditions necessitating the terminal safety exception and the date(s), local time, and location. All required documentation must be in English.
- (D) If available, CARB may also allow electronic or e-mail submittal with instructions on the CARB website.

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(3) Research

In order to assist with testing new alternative control technologies, vessel visits that participate in testing of an alternative technology may be excluded from the shore power preference provision in Section 93130.7(a) and the at berth emission reduction requirements in Section 93130.7(b). Research visits are still subject to reporting requirements. To qualify for a research exception, the following conditions must apply:

- (A) A research visit to a terminal must have a CARB approved research exception prior to arrival;
- (B) A terminal must confirm and record a visit's research exception status with CARB prior to arrival; and
- (C) Any testing must be conducted in accordance with the approved test plan.

(h) Terminal Incident Exception (TIE)

A terminal incident exception (TIE) accommodates a limited number of situations where a vessel will not reduce emissions during a visit. CARB will grant TIEs to terminals as a percentage of visits to the terminal during the previous year. At the beginning of each year, the number of TIEs is determined and each terminal operator is informed of their TIEs. The terminal operator is responsible for assigning a TIE to a vessel's visit.

(1) Granting TIE

The terminal operator that is designated in a vessel's visit report will be granted a fraction of a TIE for each vessel visit to the terminal between January 1 and December 31 in the previous year. At the beginning of each year, when TIEs are granted, the number of TIEs is rounded up to the next whole number.

- (A) TIE rates for terminals that receive container, refrigerated cargo, and passenger vessels
 - i. In 2021 and 2022, terminals that receive container, refrigerated cargo, and passenger vessels will receive 5% of their previous year visits as TIEs.
 - ii. In 2023 and thereafter, terminals that receive container, refrigerated cargo, and passenger vessels will receive 3% of their previous year visits as TIEs.
- (B) TIE rates for terminals that receive Ro-Ro vessels
 - i. In 2025, terminals that receive Ro-Ro vessels will receive 5% of their previous year visits as TIEs.

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ii. In 2026 and thereafter, terminals that receive Ro-Ro vessels will receive 3% of their previous year visits as TIEs.

(C) TIE rates for LA/LB terminals that receive tanker vessels

i. In 2027, terminals in LA/LB that receive tanker vessels will receive 5% of their previous year visits as TIEs.

ii. In 2028 and thereafter, terminals in LA/LB that receive tanker vessels will receive 3% of their previous year visits as TIEs.

(D) TIE rates for non-LA/LB terminals that receive tanker vessels

i. In 2029, non-LA/LB terminals that receive tanker vessels will receive 5% of their previous year visits as TIEs.

ii. In 2030 and thereafter, non-LA/LB terminals that receive tanker vessels will receive 3% of their previous year visits as TIEs.

(E) Summary table of TIE usage rates

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030+
Container, Reefer, Passenger	5%		3%							
Ro-Ro					5%	3%				
LA/LB Only Tankers							5%	3%		
Non-LA/LB Tankers									5%	3%

(2) Expiring TIEs

TIEs expire on XXX of the year after they are granted.

For example, a terminal that receives 200 container vessel visits in 2020 will be granted 10 TIEs on January 1, 2021. The 10 TIEs can be used from January 1, 2021 to XXX, 2022. On XXX, 2022, any unused TIEs from 2021 will expire.

(3) Retiring TIEs

Terminal operators must report use of a TIE prior to the vessel departure. Once CARB is notified by the terminal operator for a vessel’s use of a TIE, that TIE is deducted from the terminal operator’s total number of TIEs.

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TIEs are limited in number. Because of the limited number of TIEs available, it is anticipated that TIEs will be used for infrequent situations listed in Section 93130.13.

Section 93130.9. Requirements for Operators of a CARB Approved Emission Control Strategy

- (a) General responsibility for vessel operators or terminal operators contracting with a third party

Prior to entering into any agreement or contract, vessel operators or terminal operators shall follow due diligence in selecting third party control operators. Third parties emission control system operators must comply with all applicable policies, practice standards, and agreements as well as any binding legislation at the state and federal levels.

- (b) General third party operator responsibilities

- (1) The following general responsibilities shall be provided by third party operators :

- (A) Third party vendors shall provide a point of contact for contract terms and service offering implementation. Vessel operator point of contact will work with the third party operator to ensure the third party operator is in compliance with all state and federal laws as well as this control measure.
- (B) Control equipment owners/operators shall maintain a list of all subcontracted providers and the services performed by each, maintaining copies of all agreements with service providers as appropriate. CARB may request on-demand copies of all agreements with service providers.

- (c) Coordinating a visit

- (1) At least 7 calendar days before arrival, the operator of the CARB approved emission control strategy must coordinate with the vessel operator for the use of the strategy. The operator of the CARB approved emission control strategy must supply the vessel operator with information about the compatibility of the CARB approved emission control strategy.

- (d) Third party reporting requirements

Within 7 calendar days of a vessel's departure from a California berth, the third party must report the vessel's visit information to CARB.

- (1) Vessel name
(2) Vessel IMO number

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- (3) Vessel Type
- (4) Port, terminal and berth visited
- (5) Terminal operator contact information
- (6) Scheduled arrival date and time of the vessel
- (7) Scheduled departure date and time of the vessel
- (8) Dates and times when a CARB approved emission control strategy starts controlling emissions and finishes controlling emissions.
- (9) Vessel emissions while control strategy operated
 - (A) NO_x emissions in g/kW-hr
 - (B) PM_{2.5} emissions in g/kW-hr
 - (C) ROG emissions in g/kW-hr

All information reported must be accurate and complete, and signed by the responsible official. Any information missing or misreported will be subject to enforcement actions in Section 93130.14.

(e) Checklist for compliance for non-shore power visits

CARB provides a checklist for compliance for each vessel visit. Each item of the checklist are requirements under the Control Measure. Completing all items in the checklist ensures compliance under the Control Measure and failure to do any of the specific items will result in a separate violation.

- Communicate with vessel operator and terminal operator at least 7 calendar days before vessel's scheduled arrival to determine compatibility with compliance strategy.
- Position technology for use of compliance strategy.
- Control emissions within 1 hour of vessel "Ready to Work".
- Record emission reductions during visit.
- Disconnect emission control strategy within 1 hour of "Pilot on Board".
- Report vessel visit within 7 calendar days of vessel departure.

(f) Notification for malfunction

To ensure that a CARB approved emission control strategy is operating properly, CARB must be notified promptly when a malfunction occurs. CARB approved emission control strategies that operate below their approved emission control levels are at risk of losing their CARB approval (Section 93130.5(g)(3)).

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- (1) CARB must be notified promptly by email whenever a malfunction occurs that is expected to create emissions in excess of any applicable emission limitation, or to continue for a period greater than 1 hour. If email notification is not immediately possible, telephone notification or notification at the beginning of the next working day is acceptable. The notification must include the following information:
 - (A) identification of the emission points and equipment causing the excess emissions;
 - (B) magnitude, nature, and cause of the excess emissions;
 - (C) to the extent known, time and duration of the excess emissions;
 - (D) description of the corrective actions taken or expected to be taken to remedy the malfunction and to limit the excess emissions;
 - (E) information sufficient to assure CARB that the failure to operate in a normal manner by the air pollution control equipment, process equipment, or processes was not caused entirely or in part by poor maintenance, careless operation, poor design, or any other preventable upset condition or preventable equipment breakdown; and
 - (F) readings from any continuous emission monitor on the emission point and readings from any ambient monitors near the emission point.
- (2) Within 7 calendar days after a malfunction has been corrected, the owner or operator must submit a written report to CARB that includes:
 - (A) a statement that the malfunction has been corrected, the date of correction, and proof of compliance with all applicable CARB-approval requirements. The statement shall include;
 - (B) a statement of the specific cause of the malfunction;
 - (C) a description of any preventive measures taken and/or to be taken; and
 - (D) a statement affirming that the failure to operate in a normal manner by the air pollution control equipment, process equipment, or processes was not caused entirely or in part by poor maintenance, careless operation, poor design, or any other preventable upset condition or preventable equipment breakdown.

The burden of proof is on the owner or operator of the pollution control equipment to provide sufficient information to demonstrate that a malfunction occurred.

Section 93130.10. Port Requirements

(a) Port infrastructure

Ports with terminals not excluded due to thresholds found under Section 93130.8(g) Terminal Exceptions, are responsible for providing equipment or necessary infrastructure that is outside of terminal operators' contractual ability to provide and that will enable a terminal to comply with this Control Measure.

- For example, a terminal operator wants to comply with this Control Measure using shore power, but cannot install the necessary underground infrastructure and vaults due to contractual agreements with the port. In this case, the port is required to install the necessary underground and infrastructure and vaults that would allow the terminal to comply with this Control Measure.

If a terminal operator and/or vessel operator elects to purchase and use CARB approved emissions control equipment that does not need port assistance or infrastructure to operate in compliance with this Control Measure, then the port has no additional responsibility for that equipment.

- For example, a terminal operator wants to comply with this Control Measure using a contracted capture and control barge. In this situation, contracting with the third party is the terminal operator's responsibility, and the port is not required to provide any infrastructure or equipment.

(b) Wharfinger data

All operators of a public or private California port or independent marine terminal must provide Wharfinger data to CARB by April 1st of the following calendar year, regardless of visit activity.

Each California port shall provide Wharfinger information to the Executive Officer annually, beginning with the Wharfinger information for calendar year 2021.

- (1) This information shall be provided to the Executive Officer no later than April 1 of the following year.
- (2) At a minimum, the Wharfinger information shall include for each visit to the port:
 - (A) Name of the vessel;
 - (B) Vessel type;
 - (C) Company operating the vessel;
 - (D) IMO number for each vessel;

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- (E) Berth used by the vessel; and
- (F) Date(s) and time the vessel was initially tied to the berth and subsequently released from the berth.

Section 93130.11. Terminal and Port Plans

(a) Terminal plans

Beginning in 2020, terminal operators must submit a master terminal plan that discusses how the terminal will achieve emission reductions from ocean-going vessels with control requirements visiting each berth, in light of the terminal obligation which must be met as set forth in this Control Measure. For vessel categories with compliance dates after 2021, the terminal operator must submit plans with the most likely control strategy. As an alternative, Ports may submit plans for their terminal operators. Terminal plans are due to CARB by the following dates:

- Container, refrigerated cargo, passenger terminals: June 1, 2020
- Ro-Ro terminals: June 1, 2021
- LA/LB tanker terminals: June 1, 2021
- All other tanker terminals: June 1, 2021

A operator of a low-use terminal that exceeds the terminal threshold must submit a plan by June 1 the following year.

The plan shall include discussion of necessary infrastructure modifications needed to reduce emissions from ocean-going vessels at a terminal. For each strategy implemented at a terminal, the plan must include the following:

- (1) Identification and description of all necessary equipment, including whether it will be located on the vessel or on the shore;
- (2) Number of vessels expected to visit the terminal using the strategy;
- (3) Listing of each berth and include geographic boundary coordinates;
- (4) Identify berth(s) where equipment will be used;
- (5) Specify terminal/port specific berthing restrictions;
- (6) Schedule for implementing equipment; and
- (7) List the division of responsibilities between the terminal operator and the port for enacting the infrastructure required by each terminal's plan.

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Ro-Ro and tanker terminals must revise and resubmit their terminal plan seven months before implementation of new requirements. The revisions should reflect any changes to the terminal since the initial plan.

- Ro-Ro terminals: June 1, 2024
- LA/LB tanker terminals: June 1, 2026
- All other tanker terminals: June 1, 2028

All terminal plans must be signed by a responsible official and are subject to verification by enforcement staff. If terminal plans schedules are not met, they are subject to enforcement actions.

A terminal that is claiming a physical and/or operational constraint in their terminal plan must also conduct a feasibility study to determine if there are any other technologies available that could be implemented at the terminal.

(b) Port Plans

Ports are required to submit a plan showing proof that the necessary terminal infrastructure modifications are being developed or have been completed and/or report any modifications still required in order for all of the Port's terminals with control requirements to reduce emissions of vessels at berth. Ports should use terminal plans as basis for developing port plans, and may submit terminal plans on behalf of one or more of the port's terminal operators. Port plans are due to CARB by the following dates:

- Container, refrigerated cargo, passenger terminals: June 1, 2020
- Ro-Ro terminals: June 1, 2021
- LA/LB tanker terminals: June 1, 2021
- Non-LA/LB tanker terminals: June 1, 2021

The port must submit an updated plan by June 1 the following year after any new terminal at the port exceeds the annual visit threshold.

The plan shall include discussion of necessary infrastructure modifications needed to reduce emissions from ocean going vessels at a terminal. For each strategy implemented at a berth, the plan must include the following:

Identification and description of which strategy each applicable terminal will use for compliance;

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- (2) Identify any equipment purchases and/or construction that are in progress or must still be completed to reduce emissions;
- (3) Provide schedule for installing equipment and/or any necessary construction projects;
- (4) Identify terminals where equipment will be used;
- (5) Listing of each terminal with geographic boundary coordinates;
- (6) Specify any port specific berthing restrictions; and
- (7) List the division of responsibilities between the terminal and the ports for enacting the infrastructure required by each terminal's plan.

All Port plans must be signed by a responsible official and are subject to verification by enforcement staff. If port plans schedules are not met, they are subject to enforcement actions.

Section 93130.12. Remediation Fund

This section sets forth an additional compliance option in a limited number of circumstances where visits to terminals have made commitments to controlling emissions at berth.

- (a) The visits may be eligible to pay into a remediation fund to ensure a compliant visit for the hours the vessel stayed without controlling emissions in the following circumstances:
 - (1) Terminal equipment repairs – a terminal's control equipment fails and is being repaired, or new or replacement equipment is ordered but has not been received.
 - (2) Vessel equipment repairs: a vessel's control equipment fails and is being repaired, or new or replacement equipment is ordered but has not been received.
 - (3) Delays with control strategy – a vessel visit fails to achieve full emission reductions due to a delay during the visit with operating a CARB approved emission control strategy.
 - (4) Terminal construction project – a terminal has a planned upgrade or construction project which has CARB approval to temporarily halt use of terminal side control equipment to facilitate the project.
 - (5) Terminal plan has a physical constraint that is delaying the implementation of emission reduction technologies at the terminal.

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(b) Remediation fund hourly amount [based on Cost Effectiveness]

Vessel Type	Hourly Fee
Container, Reefer, Ro-Ro	[\$XXX]
Tanker	[\$XXX]
Passenger	[\$XXX]

(c) In order to utilize the remediation fund at a port, there must be a CARB approved public entity to manage the funds generated at the port.

(d) Funds are to be used for projects in and around the port to mitigate emissions according to CARB’s Carl Moyer Program Guidelines.

Section 93130.13. Summary of Responsibilities

This control measure has shared responsibilities between all parties involved in reducing emissions on ocean-going vessels. The following table outlines responsibilities and how the terminal or vessel operator can apply exceptions, VIEs, TIEs, and remediation.

Circumstances	Exception	VIE/TIE	Remediation	Responsible for non-compliance
Safety/Emergency, Research, or Vessel Commissioning	X			
Visits without reductions		X	*	Terminal/ Vessel
Vessel control equipment repair		X	X	Vessel
Terminal control equipment repair		X	X	Terminal
Terminal upgrades/construction		X	X	Terminal
Delays, but reduction occur		X	X	Terminal/ Vessel
ACT control failure		X	X	Vessel/ ACT operator
*In general, all visits may use a VIE or TIE if available, but not all visits qualify for remediation. See Section 93130.12(a)				

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Berth	Vessel	All these cases will be evaluated by Enforcement for noncompliance			
Has SP	No SP		Exhausted		Vessel
No SP/ACT	Has SP		Exhausted		Terminal
No SP/ACT	No SP		Exhausted		Terminal/ Vessel
Has ACT	Doesn't allow ACT				Vessel
SP stands for Shore Power ACT stands for Alternative Control Technology such as capture and control					

Section 93130.14. Violations

Any person who is subject to this Control Measure and fails to comply with any provision, prohibition, limit, standard, criteria, or requirement in this Control Measure is subject to the penalties, injunctive relief, and other remedies specified in Health and Safety Code Section 42400 et seq., 43016, other applicable sections in the Health and Safety Code, and other applicable provisions as provided under California law for each violation. Nothing in this Control Measure shall be construed to limit or otherwise affect any applicable penalties or other remedies available under federal law.

Any failure to meet any provision, prohibition, limit, standard, duty, criteria, or requirement in this Control Measure shall constitute a single, separate violation of this Control Measure for each day that a vessel operates without using a CARB approved emission control strategy.

A violation of the recordkeeping or reporting requirements in this Control Measure shall constitute a single, separate violation of this section for each day that the applicable recordkeeping or reporting requirement has not been met.

Section 93130.15. Sunset

The requirements specified in this Control Measure shall cease to apply if the United States adopts and enforces requirements that will achieve emissions reductions within the Regulated California Waters that are equivalent to those achieved by this Control Measure. Equivalent requirements may be from IMO regulations that are adopted and enforced by the United States or may be contained in regulations that are initiated by the U.S. Environmental Protection Agency. This Control Measure shall remain in effect until the Executive Officer

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issues written findings that federal requirements are in place that will achieve equivalent emissions reductions within the Regulated California Waters and are being enforced within the Regulated California Waters.

Section 93130.16. Severability

If any section, paragraph, subparagraph, sentence, clause, phrase, or portion of this Control Measure is, for any reason, held invalid, unconstitutional, or unenforceable by any court of competent jurisdiction, such portion shall be deemed as a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of the Control Measure.

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