NOTE: This preliminary discussion draft of the proposed Control Measure for Ocean-Going Vessels Operating At Berth and At Anchor is provided for review purposes only. The draft is subject to ongoing revisions and refinement.

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 OPERATING AT BERTH AND AT ANCHOR

The Control Measure for Ocean-Going Vessels At Berth and At Anchor 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, title 17, chapter 1, subchapter 7.5 and section 2299.3, title 13, chapter 5.1 of the California Code of Regulations. If this article is repealed or deemed invalid by a final court decision, the requirements of section 93118.3, title 17, chapter 1, subchapter 7.5 and section 2299.3, title 13, chapter 5.1 of the California Code of Regulations shall again become operative.

NOTE: Authority cited: Sections XXXXX, XXXXX Health and Safety Code. Reference: Sections XXXXX and XXXXX, Health and Safety Code.

Section 93130.1. Purpose and Intent

The purpose of this control measure is to reduce oxides of nitrogen (NOx) and particulate matter (PM) 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 NOx and PM. Furthermore, reducing NOx and PM emissions contributes to meeting California's State Implementation Plan (SIP) obligations. Additionally, reductions from shore power have a benefit of significantly reducing greenhouse gas (GHG) emissions. This contributes to meeting the goals California's GHG emission reduction efforts including the Assembly Bill (AB) 32 (Nunez, 2006) and Senate Bill (SB) 32 (Pavley, 2016).

The intent of this control measure is to ensure that every ocean-going vessel makes an appropriate effort to reduce PM and NOx emissions at berth without increasing overall GHG emissions. All parties that are necessary to achieving

emission reductions from ocean-going vessels at berth will have responsibilities under this control measure including vessel operators, terminal operators, ports, and operators of emission reduction technologies. Regulated parties must achieve emission reductions from ocean-going vessels using a California Air Resources Board (CARB) approved emission control strategy.

NOTE: Authority cited: Sections XXXXX, XXXXX Health and Safety Code. Reference: Sections XXXXX and XXXXX, Health and Safety Code.

Section 93130.2. Table of Contents, Definitions, and Acronyms

(a) Table of contents

(b) Port plan requirements

Section 93130.10. CARB Approved Emission Control Strategy

(a) CARB Approved Emission Control Strategy Requirements
(b) Overview of the application process
(c) Test plan requirements
(d) Source testing
(e) Application
(f) CARB approval of the test plan
(g) Review of CARB Approved Emission control strategy

Section 93130.11. Requirements for Operators of a CARB Approved Emission Control Strategy

(a) Shore power is a CARB approved emission control strategy.
(b) [Placeholder for requirements for operators of CARB approved emission control strategy]

Section 93130.12. Violations

Section 93130.13. Sunset

Section 93130.14. Severability

(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 NOx, PM, 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 near a California port.

(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" for purposes of this section.

(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.

(7) "California Ports" means the Port of Hueneme, the Port of Long Beach, the Port of Los Angeles, the Port of Oakland, the Port of Richmond, the Port of San Diego, the Port of San Francisco, and the Port of Stockton; and any other port in California that receives an ocean-going vessel.

(8) “CARB Approved Emission Control Strategy” means a CARB approved method of reducing emissions on ocean-going vessels at berth to a satisfactory level for compliance with the Control Measure.

(9) “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.

(10) “Container Vessel” means a self-propelled ocean-going vessel constructed or adapted primarily to carry uniformly sized ocean freight containers.

(11) “Diesel-Electric Engine” means a diesel engine connected to a generator that is used as a source of electricity for propulsion or other uses.

(12) “Diesel Engine” means an internal combustion, compression-ignition (CI) 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.

(13) “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.

(14) “Distributed Generation” shall have the same meaning as that term is defined in title 17, CCR, Section 94202.

(15) “Docked at the Berth (at-berth)” means the state of being tied to a berth.

(16) “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 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 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 to the port 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; or

(C) The electrical system at the terminal cannot provide electrical power as a result of equipment failure.

(17) “Executive Officer” means the Executive Officer of CARB, or his or her designee.

(18) “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.

(19) “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.

(20) “Greenhouse Gas” (GHG) means carbon dioxide (CO_2), methane (CH_4), nitrogen trifluoride (NF_3), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and other fluorinated greenhouse gases.

(21) “Interim CARB approved emission control strategy” means a CARB approved emission control strategy with less stringent standards allowed for compliance to enable a phase-in time for the tanker vessels.

(22) “Marine Diesel Oil (MDO)” means any fuel that meets all the specifications for DMB grades as defined in Table I of International Standard ISO 8217:2017, which is incorporated herein by reference, or DMB grades as defined in Table I of International Standard ISO 8217:2017 which is incorporated herein by reference.

(23) “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.

(24) “Master” means the person who operates an ocean-going vessel or is otherwise in charge of the vessel’s operations.

(25) “Military Vessel” means a vessel that is owned or operated by the military or under the direct control of the military.

(26) “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 (LOA) 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 (GT ITC) 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.

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

(27) “Operate” means steering or otherwise running the vessel or its functions while the vessel is underway, moored, anchored, or at berth.

(28) “Own” means having all 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.

(29) “Oxides of Nitrogen (NOx)” means compounds of nitric oxide (NO), nitrogen dioxide (NO_2), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.

(30) “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).

(31) “Particulate Matter 2.5 (PM2.5)” means any particulate matter that have a diameter of less than 2.5 micrometers.

(32) “Passenger Vessel” means a self-propelled vessel constructed or adapted primarily to carry people.

(33) “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.

(34) “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.

(35) “Port Authority” means a governing body that oversees a California port and related transportation infrastructure. For the purposes of this Control Measure, “Port Authority” and “Seaports” are interchangeable.

(36) "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.

(37) "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.

(38) "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.

(39) "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.

(40) "Responsible Party" means any person with an obligation under this Control Measure.

(41) "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.

(42) "Seaport" See "Port Authority"

(43) "Shore Power" refers to electrical power being provided by either the local utility or by distributed generation.

(44) “Tanker Auxiliary Boiler” means a steam generator on a tanker vessel which is used to offload liquid product.

(45) “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.

(46) “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.

(47) “Terminal Complex (complex)” means either

(A) a port and a group of independent terminals within 3 miles of the port, or

(B) a group of terminals independent from a port within 3 miles of one another.

(48) “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.

(49) “this Control Measure” means the Control Measure for Ocean-Going Vessels Operating At Berth and At Anchor, California Code of Regulations, title 17, Sections 93130-93130.14.

(50) “Utility” shall have the same meaning and be used interchangeably with the term “Electric Utility” as defined in Public Resources Code Section 25108.

(51) “U.S.-flag vessel” when used independently means either a Government vessel or a privately owned U.S.-flag commercial vessel.

(52) “Vessel Commissioning Shore Power” 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

(53) “Vessel Operator” means any party who is in direct control of the vessel. Direct control includes, but is not limited to, vessels that carry cargo or passengers for the person pursuant to a charter agreement or other arrangement with a third-party for the third-party to operate the vessel. For purposes of this definition, "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.

(54) “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.

(55) “Visit” means the time period during the berthing time 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 the pilot takes navigational control of the vessel for departure.

(c) Acronyms

(1) CAISO: California Independent System Operator

(2) CARB: California Air Resources Board

(3) CFR: Code of Federal Regulation

(4) CO2: Carbon Dioxide

(5) DPM: Diesel Particulate Matter

(6) EO: CARB Executive Officer

(7) g/kW-hr: Gram per Kilowatt Hour

(8) GHG: Greenhouse Gas

(9) ISO: International Organization for Standardization

(10) LADWP: Los Angeles Department of Water and Power

(11) LOA: Length Overall

(12) MDO: Marine Diesel Oil

(13) MGO: Marine Gas Oil

(14) NOx: Oxides of Nitrogen

(15) PM: Particulate Matter

(16) PM2.5: Particulate Matter 2.5

(17) Ro-Ro: Roll-On-Roll-Off Vessel

(18) SIP: State Implementation Plan

(19) UNCLOS: United Nations Convention on the Laws of the Seas

(20) U.S.: United States

Section 93130.3. Applicability

(a) General applicability

Except as provided in Section 93130.4 General Exceptions, this control measure applies to 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. This control measure also applies to any person who owns, operates,

or leases a port, terminal or berth located where ocean-going vessels visit. In addition, this control measure also applies to any person who owns, operates, or leases 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, 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, complex, 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 (UNCLOS) 1982, Article 19, subpart 2.

This exception does not apply to a vessel that was otherwise scheduled or intended to enter California internal or estuarine waters or call at a port or terminal facility for any reasons other than those listed in this subsection.

(b) Government and military vessels

The requirements of this control measure do not apply to government or military vessels. This includes auxiliary engines and tanker auxiliary boilers on-board ocean-going 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. However,

such vessels are encouraged to act in a manner consistent, so far as is reasonable and practicable, with this section. Commercial vessels that also carry some military cargo are not military vessels unless the military is the vessel operator.

Section 93130.5. Ocean-going Vessel At Anchor and At Berth 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 12 consecutive readings from any operation on the vessel using EPA Opacity Test Method 9 (40 CFR Pt. 60, App. A-4, effective October 31, 2016), which is incorporated herein by reference.

Section 93130.6. Ocean-going Vessel Operator Requirements

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

(a) Shore power preference for at berth emission reductions

(1) Shore power is a CARB approved control strategy.

(2) Vessel operators are required to use shore power each visit to a shore power berth if they operate an ocean-going vessel with commissioned shore power equipment.

(3) 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

(A) Beginning January 1, 2021, all container and refrigerated cargo vessel visits must reduce auxiliary engine emissions through a CARB approved emission control strategy unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.6(e)).

(2) Passenger vessels

(A) Beginning January 1, 2021, all passenger vessel visits must reduce auxiliary engine emissions through a CARB approved emission control strategy unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.6(e)).

(3) Roll-on roll-off vessels

(A) Beginning January 1, 2025, all roll-on-roll-off vessel visits must reduce auxiliary engine emissions through a CARB approved emission control strategy unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.6(e)).

(4) Dry bulk and general cargo vessels

(A) Beginning January 1, 2021, all dry bulk and general cargo vessels that visit a California berth must report the general visit information (Section 93130.6(d)(1)).

(B) If the vessel visit uses a CARB approved emission control strategy, then the vessel operator must also report:

i. visit information when using a CARB approved emission control strategy (Section 93130.6(d)(2)); and

ii. Information if a vessel uses an exception (Section 93130.6(d)(3))

(5) Tanker vessels

(A) [Placeholder – CARB is exploring different phase-in strategies]

(B) Beginning January 1, 2025, all tanker vessel visits must reduce auxiliary engine emissions through an interim CARB approved emission control strategy unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.6(e)).

(C) Beginning January 1, 2031, all tanker vessel visits must reduce auxiliary engine emissions through an CARB approved emission control strategy unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.6(e)).

(6) 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.

(A) [Placeholder – CARB is exploring different phase-in strategies]

(B) Beginning January 1, 2025, all tanker vessel using steam driven product pumps that visit must reduce tanker auxiliary boiler emissions through an interim CARB approved emission control strategy unless the vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.6(e)).

(C) Beginning January 1, 2031, all tanker vessel using steam driven product pumps that visit must reduce tanker auxiliary boiler emissions through a CARB approved emission control strategy unless the

vessel visit qualifies for a general exception (Section 93130.4) or a vessel visit exception (Section 93130.6(e)).

(c) Coordinating a vessel visit with the terminal operator and the operator of a CARB approved emission control strategy

At least seven 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.

(d) Reporting vessel at-berth visit information

(1) General visit information

Within seven 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) Port and terminal and/or berth visited

(F) Start and end time of visit

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

(A) Type of CARB approved emission control strategy used

(B) Date and time when vessel has been declared as "ready to work"

(C) Start and end date and time when a CARB approved emission control strategy is reducing emissions

(D) Type of fuel used in auxiliary engine(s)

i. Sulfur content of fuel used in auxiliary engine(s)

(E) Amount of fuel used in auxiliary engine(s) during vessel visit

(F) 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

(G) Time pilot on-board in preparation for departure

(H) Information specified in the approved compliance strategy's compliance instructions

(3) Information if a vessel uses an exception

Within seven days of a vessel's departure from a California berth, the vessel operator must report the following general visit information to CARB.

(A) 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 accurate and complete. Any information missing or misreported will be subject to enforcement actions as define in Section 93130.12 Violations.

(5) In addition to reporting general visit information, each CARB approved emission control strategy may include reporting requirements for strategy specific visit information.

(e) Vessel Visit Exceptions

The following is a list of exceptions that may apply to a vessel operator's visit. Vessel visit exceptions apply only as long as defined. Vessel operators are still required to report their general visit information (Section 93130.6(d)(1)) and information for visits where an exception was utilized (Sections 93130.6(d)(3)).

(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 and determines that compliance with this section would endanger the safety of the vessel, its crew, its cargo or its passengers because of severe weather conditions, equipment failure, 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:

- Takes all reasonable precautions after the conditions necessitating the exception have ended to avoid or minimize repeated claims of exception under this subsection; and

- Submits to the Executive Officer, within seven working days after the end of the event, all documentation necessary to establish the conditions necessitating the safety exception and the date(s), local time, and location. All documentation required must be in English.

(2) Equipment failure

(A) If there is an equipment failure with a CARB approved emission control strategy at a terminal, the terminal is responsible for arranging another CARB approved emission control strategy for the vessel for future visits.

(B) If the equipment failure is on the vessel, the vessel operator must include a schedule for repairs made and the vessel operator must arrange for another CARB approved emission control strategy during each future voyage to California until the equipment failure is resolved.

(3) Equipment Manufacturer Delays

A vessel operator who has purchased new equipment in order to comply with Section 93130.6, will be considered to be in compliance if the new equipment has not been received due to manufacturing delays, as long as the following conditions are met:

(A) The equipment was purchased, or the vessel operator and seller had entered into contractual agreement for the purchase, at least twelve months prior to the required compliance date as specified in section 93130.6(b);

(B) Proof of purchase, such as a purchase order and bill of sale must be maintained by the operator and provided to an agent or employee of CARB upon request; and

(C) [Placeholder for equipment manufacturer delay requirement to consider length of exception to allow time for installation once equipment is received]

(4) Vessel Commissioning

ARB provides an exception for the first commissioning visit made by a vessel to a terminal as long as the vessel was able to successfully connect to shore power during that visit. At the request of the vessel operator, ARB staff provides an additional exception for visits, on a case-by-case basis, in circumstances where a vessel operator demonstrates that the commissioning process could not be accomplished in a single visit or the terminal requires that the vessel be recommissioned.

(5) 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 93130.6(a)

and the at berth emission reduction requirements in Section 93130.6(b). Research visits are still subject to the reporting visit information requirements. To qualify for the research exception, the following conditions apply:

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

(6) Vessels visiting a low activity port, complex, or terminal

The specific requirements for vessel categories emission reduction requirements in Section 93130.6 (b) do not apply to vessel visits to the following:

(A) A port, or complex that fall below the annual port threshold (Section 93130.7(g)(1)); or

(B) A terminal that fall below an annual terminal threshold (Section 93130.7(g)(2)).

Section 93130.7. Terminal Requirements

Terminals not excluded under Section 93130.4 General 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 use shore power when visited by a commissioned shore power vessel.

(2) 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.

(3) It is the terminal operator's responsibility to commission vessels equipped with shore power.

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

If the terminal has shore power, it is the vessel operator's responsibility to arrange 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. In this case, if a notice of violation is issued, it will be issued to both the terminal operator and the vessel operator.

(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) Coordinating a visit with the vessel operator and the operator of a CARB approved emission control strategy

At least seven 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.

(e) Terminal reporting requirements

(1) General visit information

Within seven 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

(G) Construction at the terminal

(2) Compliant visits information

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

(A) Emission control method used

(B) If CARB approved emission control strategy was provided by the terminal, start and end time of emission control.

(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 93130.12.

(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 the CARB's approval.

(f) Construction

The terminal operator is responsible for finding an available alternative approved control strategy for vessels to reduce emissions while the equipment on the berth is being repaired.

(g) Terminal Exceptions

The following is a list of exceptions that may apply to a terminal operator for a vessel's visit.

(1) Vessel visits to ports, and complexes that fall below a visit threshold.

Table 1. Annual Port Thresholds

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

(A) A port or complex with less vessel visits than the annual port threshold (Table 1) for two consecutive calendar years will be low activity in the following calendar year. Vessel visits to low activity ports and complexes are excluded from the requirement to reduce emissions, even if a terminal at the port or complex exceeds the annual terminal threshold (Table 2).

(B) [Placeholder – CARB considering a once in always in provision]

(C) A low activity port or complex that receives more vessel visits than the annual port threshold for two consecutive calendar years is no longer considered low activity in the following calendar year.

For example, a port that receives 20 tanker vessel visits per calendar year is a low activity port. Activity at the port grows and that port receives 30 tanker vessel visits in 2025, and 30 tanker vessel visits in 2026. In 2027, the port is no longer a low activity port and vessel visits to the port are no longer excluded.

(2) Vessel visits to a terminal that falls below a visit threshold

Table 2. Annual Terminal Thresholds

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

(A) A terminal with less vessel visits than the annual terminal threshold (Table 2) for two consecutive calendar years will be considered a low activity terminal for the following calendar year. Vessel visits to low activity terminals are excluded from the requirement to reduce emissions.

(B) [Placeholder – CARB considering a once in always in provision]

(C) A low activity terminal that receives more visits than the annual terminal threshold for two consecutive calendar years is no longer considered low activity in the following calendar year.

(3) Terminal Safety and emergency events

The requirements of this control measure do not apply during a visit if the terminal operator, or port operator reasonably and determines that compliance with this section would endanger the safety of the terminal, or its staff because of severe weather conditions, equipment failure, 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:

- Takes all reasonable precautions after the conditions necessitating the exception have ended to avoid or minimize repeated claims of exception under this subsection; and
- Submits to the Executive Officer, within five working days after the end of the event, all documentation necessary to establish the conditions necessitating the terminal safety exception and the date(s), local time, and location. All documentation required must be in English.

(4) Equipment failure

This applies to cases where shore power or other CARB approved emission control strategies equipment has failed and is being repaired.

(A) If there is an equipment emergency with a control strategy on the terminal that delays or interrupts the use of the strategy, the terminal operator must notify CARB in writing within seven days of the equipment failure including dates and times of failure and schedule for repairs made. For future visits to the berth, the terminal operator is responsible for finding another CARB approved emission control

strategy for vessels to reduce emissions while the equipment on the berth is being repaired.

(B) The terminal operator is not responsible for finding a CARB approved emission control strategy for the vessel if there is an equipment failure on the vessel that prevents the use of the terminal's CARB approved emission control strategy.

(5) 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 reduction At Berth Emission Reduction Requirements and the Shore Power Preference provision. In order to be considered for the research constraint exception a terminal must include:

(A) A research vessel visiting a terminal must have a CARB approved research exception prior to arrival;

(B) A terminal must confirm a vessel's research exception status with CARB prior to arrival;

(C) Any testing must be conducted in accordance with the approved test plan; and

(D) Research visits are still subject to the reporting visit information requirements specified in Section 93130.6 (d).

(6) Physical constraint

CARB may approve an exception a the terminal on a case by case basis if the terminal is demonstrates an inability to comply with the requirements specified in Section 93130.7 "Terminal Requirements" due to physical constraints. In order to be considered for the physical constraint exception a terminal must include the following in their terminal plan:

(A) Identification and description of each physical constraint (e.g. narrow water channel, pier unable to support shore side or landside CARB approved emission control strategy; and

(B) Schedule for any planned terminal upgrades which will allow for compliance and the date which upgrades are expected to be completed.

(C) A feasibility study to determine if there are any other technologies available that could be implemented at the terminal.

The terminal plan must be reevaluated every year for CARB approval of a renewal for the physical constraint exception.

Section 93130.8. Port Requirements

Ports are responsible for providing necessary infrastructure that is outside of terminals' ability to provide.

[Placeholder for port responsibilities to provide infrastructure]

Section 93130.9. Terminal and Port Plans

(a) Terminal plans

Beginning in 2021, terminal operators must submit a master terminal plan that discusses how the terminal will achieve emission reductions from ocean-going vessels visiting the terminal. For vessel categories with compliance dates after 2021, the terminal 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 June 1 the year before compliance begins.

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; and

(6) Schedule for implementing equipment.

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 plan requirements

Port operators 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 the Port's terminals to reduce emissions of vessel at berth. The port plan must list the division of responsibilities between the terminal and the port for enacting the

infrastructure required by each terminal's plan. The port operator must submit an updated plan if a new terminal at the port ever exceeds the annual visit threshold. Port plans are due January 1, 2021 for ports with container, refrigerated cargo, and passenger terminals. Port plans are due January 1, 2024, for ports with other terminals.

Section 93130.10. 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.

(a) CARB Approved Emission Control Strategy Requirements

(1) Default emission rates of auxiliary engines on ocean-going vessels are 13.8 g/kW-hr for NOx and 0.17 g/kW-hr for DPM. Default emission rates of tanker auxiliary boilers on ocean-going vessels are 2.0 g/kW-hr for NOx and 0.17 g/kW-hr for PM2.5. These emission rates represent a typical vessel operating on marine diesel oil with a sulfur content of 0.10 percent.

(2) Unless subject to an exception set forth in this Control Measure, all vessel visits must reduce emissions with a CARB approved emission control strategy.

(A) This strategy must demonstrate emission reductions that achieve emission rates less than 2.8 g/kW-hr for NOx and 0.03 g/kW-hr for DPM for auxiliary engines or a reduction of at least 80 percent in emissions of NOx and DPM.

(B) 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 NOx and 0.03 g/kW-hr for PM2.5 for tanker auxiliary boilers or a reduction of at least 80 percent in emissions of NOx and PM2.5.

(3) CARB approved emission control strategy may also be demonstrate an interim emission reductions for auxiliary engines and tanker auxiliary boilers.

(A) For the auxiliary engines, the intermediate emission rate is less than 6.9 g/kW-hr for NOx and 0.085 g/kW-hr DPM or a reduction of at least 50 percent in emissions of NOx and DPM.

(B) For the tanker auxiliary boiler, the intermediate requirement is 1.0 g/kW-hr for NOx, and 0.085 g/kW-hr for PM2.5 or a reduction of at least 50 percent in emissions of NOx and PM2.5.

(4) Additional criteria for CARB approval

(A) A CARB approved emission control strategy utilizing SCR shall have ammonia emissions no greater than five ppmdv.

(B) [Placeholder to ensure No additional impacts to air or water]

(C) [Placeholder for discussion of warranty]

(D) [Placeholder for durability requirements]

(E) [Placeholder for engine family applicability]

(b) Overview of the application process

Before submitting an application for a CARB approved emission control strategy, the applicant must submit a test plan for conducting the emissions reduction testing, durability testing, and a timeline for testing. After the applicant receives 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 become a compliance option for vessel visits when used in a manner that is consistent with all the conditions of the approval.

(c) Test plan requirements

(1) Identification of the contact persons, phone numbers, names and addresses of responsible party submitting the test plan

(2) Description of the emission control strategy's principles of operation. A schematic depicting the components and 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.

(3) Description of testing to be conducted to demonstrate emission reductions and durability.

(4) 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.

(5) 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 or if the test plan is incomplete, the Executive Officer shall notify the applicant of the disapproval in writing within 30 working days of receiving the test plan. The applicant may choose to withdraw from the application process or submit additional materials and clarifications.

(6) Upon determining the test plan is satisfactory, the Executive Officer shall issue a test plan approval letter to the applicant within 45 days.

(d) Source testing

Source testing shall be used to demonstrate that a proposed emission control strategy achieves the performance standards specified above. Testing must

be done by a third party specified in the test plan and approved by CARB. Alternative tests 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) NOx and CO_2 shall be measured using CARB Test Method 100, dated July 1997, which is incorporated herein by reference, or equivalent district-approved test method;

(2) 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"), all of which are incorporated herein by reference;

(3) [Placeholder for PM 2.5 test method]

(4) 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

(5) The sulfur content of fuels shall be determined pursuant to International Standard ISO 8754 (as adopted in 2003), which is incorporated herein by reference.

(e) Application

(1) All applications, correspondence, and reports must be submitted 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

(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 the Recommended Emissions Testing Guidelines for Ocean-going Vessels.

(5) The Executive Officer shall determine whether the application is complete. If incomplete, the executive officer will notify applicant within 30 working days requesting additional information to complete the application.

(f) CARB approval of the test plan

Within 90 working 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, at which time the applicant must apply to extend the approval.

(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 submit using the original test data, additional test data, engineering justification and analysis, or any other information deemed necessary by the Executive Officer to demonstrate that the strategy has not changed and is still effective.

(2) Modifications to a CARB approved emission control strategy

Proposed modifications the design or operation of a CARB approved emission control strategy must be reviewed by the Executive Officer. 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:

i. Any change of materials or specifications to the control strategy

ii. Any change to the component composition or reagent usage

iii. Any change to the sensors, part sizes, or sizing methodology

iv. Any change to the monitoring and notification system control logic, algorithms, operating parameters

v. Any change to a portion of the approval

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

(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.

(g) 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:

(1) Shore and barge-based systems shall be tested after every [placeholder for discussion of appropriate time period - 1,000] 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 [placeholder for discussion of appropriate time period - 1,000] 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 NOx emissions are being measured.

The Executive Officer may modify the testing frequency as he/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 93130.11. Requirements for Operators of a CARB Approved Emission Control Strategy

(a) Shore power is a CARB approved emission control strategy.

(b) [Placeholder for requirements for operators of CARB approved emission control strategy]

Section 93130.12. Violations

[Placeholder – Violation language is still being developed]

Any person who is subject to this Control Measure and fails to comply with any provision, prohibition, limit, standard, criteria, or requirement in this section is subject to the penalties, injunctive relief, and other remedies specified in Health and Safety Code Section 42400 et seq., other applicable sections in the Health and Safety Code; and other applicable provisions as provided under California law for each violation. Nothing in this section 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, criteria, or requirement in this Control Measure shall constitute a single, separate violation of this section 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 93130.13. 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 section. 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 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 93130.14. 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.

NOTE: Authority cited: Sections 38510, 38562, 39600, 39601, 39607, 39650, 39658, 39659, 39666, 41511, and 43013, Health and Safety Code. Reference: Sections 38551, 38560, 38562, 39600, 39650, 39658, 39659, 39666, 41510, 41511, and 43013, Health and Safety