

DRAFT PROPOSED FINAL REGULATION ORDER

PROPOSED AMENDMENTS TO THE REGULATIONS TO REDUCE EMISSIONS FROM DIESEL ENGINES ON COMMERCIAL HARBOR CRAFT OPERATED WITHIN CALIFORNIA WATERS AND 24 NAUTICAL MILES OF THE CALIFORNIA BASELINE

Amended section 93118.5, title 17, chapter 1, subchapter 7.5, California Code of Regulations (CCR), to read as follows:

Section 93118.5. Airborne Toxic Control Measure for Commercial Harbor Craft.

(a) Purpose and Intent.

The purpose and intent of this section is to reduce diesel particulate matter (PM), oxides of sulfur (SO_x), ~~and~~ oxides of nitrogen (NO_x), and greenhouse gas (GHG) emissions from diesel propulsion and auxiliary engines on harbor craft that operate in any of the waters subject to this section ("Regulated California Waters"). This section implements provisions of the Goods Movement Emission Reduction Plan, adopted by the California Air Resources Board (ARB or CARB) in April 2006, to reduce emissions and health risk from ports and the movement of goods in California. This Control Measure also ensures that commercial harbor craft do not create excess visible emissions. California's commercial harbor craft operations are largely situated in the vicinity of at-risk communities that directly benefit from localized reductions of NO_x and PM emissions. This contributes to meeting community health goals set forth in Assembly Bill 617 (Garcia, Stats. 2017, ch. 136). Furthermore, NO_x and PM emission reductions contribute to meeting California's State Implementation Plan obligations for attainment, and further CARB's obligations under sections 39660 et seq. and 43013 et seq. of the Health & Safety Code. Additionally, use of shore power has a benefit of simultaneously reducing toxic, criteria pollutant, and GHG emissions. This contributes to meeting California's GHG emission reduction targets established in Assembly Bill 32 (Nunez, Stats. 2006, ch. 488) and Senate Bill 32 (Pavley, Stats. 2016, ch. 249).

For purposes of this regulation, "this section" refers to "Section 93118.5" in its entirety.

(b) Applicability.

- (1) Except as provided in subsections (b)(6) and (c), this section applies to any person who sells, supplies, offers for sale, purchases, owns, operates, leases, charters, or rents any new or in-use diesel fueled harbor craft that is operated in

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any of the Regulated California Waters~~-,~~ and commencing January 1, 2023, to any new or in-use harbor craft, regardless of fuel type.

- (2) *Engine Subject to Multiple CARB Regulations.* In the event an engine that is permanently affixed to a harbor craft is subject to the requirements of this section, and either:
 - (A) the regulation for portable compression ignition (CI) engines and equipment units (sections 93116-93116.5, title 17, California Code of Regulations (CCR)), or
 - (B) the regulation for in-use off-road diesel vehicles (sections 2420-2427, title 13, CCR), the requirements of this section shall supersede the requirements of either of the regulations cited in 93118.5(b)(2)(A) or 93118.5(b)(2)(B) above.
- (3) This section applies to towboats and tugboats engaged in or intending to engage in the service of pulling, pushing, or hauling alongside tank vessels or tank barges.
- (4) Notwithstanding the provisions of title 13, CCR, section 2299.1, and title 17, CCR, sections ~~93118~~93130 through 93130.20, this section shall apply to any ocean-going tugboats and towboats and shall supersede the requirements of 13 CCR 2299.1 and 17 CCR ~~93118~~93130 through 93130.20 in their entirety for ocean-going tugboats and towboats. Commencing January 1, 2023, this section applies to ATB tug-barge combinations, and petrochemical tank barges. For purposes of this ~~paragraph~~ section, "ocean-going tugboats and towboats" shall mean tugboats and towboats with a "registry" (foreign trade) endorsement on ~~its~~ their United States (U.S.) Coast Guard certificates of documentation, or tugboats and towboats that are registered under the flag of a country other than the United States.
- (5) Nothing in this section shall be construed to amend, repeal, modify, or change in any way any other applicable State, U.S. Coast Guard, or other federal requirements. Any person subject to this section shall be responsible for ensuring compliance with both U.S. Coast Guard regulations and the requirements of this section and any other applicable State and federal requirements, including but not limited to, obtaining any necessary approvals, exemptions, or orders from the U.S. Coast Guard.
- (6) This section shall not apply to any engine and equipment that fall within the scope of the preemption of Section 209(e)(1)(A) of the Federal Clean Air Act (42 United States Code (U.S.C.) 7543(e)(1)(A)) and as defined by regulation of

the U.S. Environmental Protection Agency (U.S. EPA).

(c) Exemptions.

All or portions of this section do not apply to the following, as provided below, but vessels that are partly or wholly exempt from this section may be subject to other State or federal regulations and requirements. A person subject to such other State or federal regulations and requirements is solely responsible for ensuring the vessel complies with those regulations and requirements. All other portions of this section shall apply unless otherwise specified:

- (1) The requirements of this section do not apply to harbor craft voyages that are comprised of continuous and expeditious navigation through any of the Regulated California Waters for the purpose of traversing such bodies of water without entering California internal or estuarine waters or calling at a port, roadstead, or terminal facility. "Continuous and expeditious navigation" includes stopping and anchoring only to the extent such stopping and anchoring are required by the U.S. Coast Guard; rendered necessary by force majeure or distress; or made for the purpose of rendering assistance to persons, ships, or aircraft in danger or distress. This exemption does not apply to the passage of a harbor craft 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. Further, notwithstanding any U.S. Coast Guard mandated stops or stops due to force majeure or the rendering of assistance, this exemption does not apply to a vessel that was otherwise scheduled or intended to enter California internal or estuarine waters or call at a port, roadstead or terminal facility;
- (2) ~~Except as provided in Paragraph (3) below,~~ Except as provided in subparagraph (c)(3) below during the time period prior to January 1, 2023, a temporary replacement vessel is exempt only from the requirements set forth in subsection (e)(6.1) and only upon written approval by the CARB's Executive Officer (E.O.). All other provisions in this section shall apply to a temporary replacement vessel subject to this paragraph. An owner or operator, who has or will have a vessel taken out of service, may apply in writing to the E.O. to operate a temporary replacement vessel pursuant to the following:
 - (A) The E.O. shall approve or disapprove such a request within ~~30~~15 days of receipt. The E.O. shall not unreasonably withhold approval of the request to operate the temporary replacement vessel;
 - (B) If the approval is granted, the temporary replacement vessel's operating time will be specified in the approval by the E.O., along with any other

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- terms, conditions, or requirements the E.O. deems necessary, but in no case shall the approved operating time in Regulated California Waters for a specific temporary replacement vessel exceed one year total for any single vessel that is temporarily replaced; ~~and~~
- (C) No temporary replacement vessel exemptions shall be approved for a vessel that is taken out of service more than 12 months in any 24-month period or if the E.O. cannot determine the length of time a vessel has been taken out of service within any 24-month period; and
- (D) On and after January 1, 2023, both main and auxiliary engines on temporary replacement vessels must meet Tier 2 or newer marine or off-road emission standards.
- (3) This subparagraph is only applicable until December 31, 2022. A temporary replacement vessel used to replace a vessel that has its homeport in the South Coast Air Quality Management District (SCAQMD) is exempt only from the compliance dates set forth in Table 8.1 of subsection (e)(6) and only upon written approval from the E.O. All other provisions in this section, including but not limited to, the compliance dates specified in Table 7.1, Table 9.1, and Table 10.1 of subsection (e)(6), shall apply to a temporary replacement vessel subject to this paragraph. An owner or operator, who has or will have a vessel taken out of service, may apply in writing to the E.O. to operate a temporary replacement vessel pursuant to the following:
- (A) The E.O. shall approve or disapprove such a request within 15 days of receipt. The E.O. shall not unreasonably withhold approval of the request to operate the temporary replacement vessel;
- (B) If the approval is granted, the temporary replacement vessel's operating time will be specified in the approval by the E.O., along with any other terms, conditions, or requirements the E.O. deems necessary, but in no case shall the approved operating time in Regulated California Waters for a specific temporary replacement vessel exceed one year total for any single vessel that is temporarily replaced; and
- (C) No temporary replacement vessel exemptions shall be approved for a vessel that is taken out of service more than 12 months in any 24-month period or if the E.O. cannot determine the length of time a vessel has been taken out of service within any 24-month period;
- (4) A temporary emergency rescue/recovery vessel is exempt from this section in its entirety;
- (5) A recreational vessel is exempt from this section in its entirety;

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- (6) An ocean-going vessel, except for ocean-going tugboats and towboats as provided in subsection (b)(4), is exempt from this section in its entirety; on and after January 1, 2023, dredges, petrochemical tank barges and articulated tug barges are not exempt from this section;
- (7) A registered historic vessel is exempt only from subsection (e)(6) and (e)(6.1);
- (8) A U.S. Coast Guard vessel is exempt from this section in its entirety;
- (9) A military tactical support vessel is exempt from this section in its entirety;
- (10) An engine rated less than 50 horsepower (hp) is exempt only from subsection (e)(6); on and after January 1, 2023, engines of all power ratings on regulated in-use vessels including those rated less than 50 hp are subject to this section including the requirements in subsection (e)(6.1);
- (11) This subparagraph is only applicable until December 31, 2022. Near-Retirement Vessels. A harbor craft is exempt from the requirements of subsection (e)(6)(C) and (e)(6)(D) if all of the following criteria have been met:
 - (A) the vessel is scheduled to be taken out of service and retired permanently;
 - (B) the vessel is actually taken out of service and retired on or before the retirement date scheduled under (A) above; and
 - (C) the vessel has an engine with a compliance date, as set forth in subsection (e)(6)(D), that is within one year of the vessel's scheduled retirement date under (A) above.

Operation of a vessel subject to this provision after the scheduled retirement date or the engine's compliance date, whichever occurs later, is a separate violation of this section for each and every engine and each and every day of operation during which an engine on the vessel does not meet the requirements of subsection (e)(6)(C) or other parts of this section.

- (12) On and after January 1, 2023, a dedicated emergency use vessel is exempt only from subsections (e)(6.1), (g), (h), (k), and (l);
- (13) On and after January 1, 2023, a commercial fishing vessel is exempt only from subsection (e)(6.1) and (l);

(d) Definitions.

For purposes of this section, the definitions of Health and Safety Code (H&S) sections 39010 through 39060 shall apply except as otherwise specified in this section:

- (1) "Air District" means one of the local air pollution control districts (APCDs) or air quality management districts (AQMDs) established under H&S section 40000 et seq.
- (2) "Air Basin" means a land area with generally similar meteorological and geographic conditions throughout. California is currently divided geographically into 15 air basins for the purpose of managing the air resources of the State on a regional basis.
- (23) "Alternative Diesel Fuel" means any fuel used in a diesel engine that is not commonly or commercially known, sold, or represented by the supplier as diesel fuel No. 1-D or No. 2-D, pursuant to the specifications in American Society for Testing and Materials (ASTM) D975-81, "Standard Specification for Diesel Fuel Oils," as modified in May 1982, which is incorporated herein by reference, and does not require engine or fuel system modifications for the engine to operate, although minor modifications (e.g., recalibration of the engine fuel control) may enhance performance. Examples of alternative diesel fuels include, but are not limited to, biodiesel and biodiesel blends not meeting the definition of CARB diesel fuel; Fischer-Tropsch fuels; emulsions of water in diesel fuel; and fuels with a fuel additive, unless:
 - (A) the additive is supplied to the engine fuel by an on-board dosing mechanism, or
 - (B) the additive is directly mixed into the base fuel inside the fuel tank of the engine, or
 - (C) the additive and base fuel are not mixed until engine fueling commences, and no more additive plus base fuel combination is mixed than required for a single fueling of a single engine.
- (34) "Alternative Fuel" means natural gas, propane, ethanol, methanol, gasoline, hydrogen, electricity, or other technologies that do not meet the definition of CARB diesel or alternative diesel fuel. "Alternative fuel" also means any mixture that only contains these fuels.
- (45) Prior to January 1, 2023, "Annual Hours of Operation" means the total number of hours, rounded to the nearest whole hour, a vessel engine is used for all commercial purposes in Regulated California Waters in the calendar year

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(January 1 to December 31) immediately prior to the engine's applicable compliance date set forth in subsection (e)(6)(D). For example, if a vessel is used for commercial fishing and commercial non-fishing purposes, the total number of hours combined for both uses shall be the total annual hours of operation for that vessel.

- (5.1) On and after January 1, 2023, "Annual Hours of Operation" means the total number of hours, rounded to the nearest whole hour, a vessel engine is used for all commercial purposes in Regulated California Waters in the calendar year (January 1 to December 31). For example, if a vessel is used for commercial fishing and commercial non-fishing purposes, the total number of hours combined for both uses shall be the total annual hours of operation for that vessel. Any use of a commercial vessel for non-commercial purposes must be documented based on recordkeeping requirements in subsection (m)(4), otherwise the annual hours of operation will be based on records from the non-resettable hour meter.
- (6) "Articulated Tug Barge (ATB)" means a petrochemical tank barge that is mechanically linked with a paired tug that functions as a tug-barge combination.
- (57) "Auxiliary Engine" means an engine designed primarily to provide power for uses other than propulsion.
- (68) "Averaging" means an exchange of excess reduced regulated emissions among engines on vessels in the same owner's or operator's fleet.
- (9) "Battery Plug-in Hybrid Propulsion System" means a harbor craft main propulsion system utilizing energy from two or more different energy sources, one of which includes a battery energy storage system that is designed to periodically be charged by an external energy source.
- (710) "Baseline" means the emissions level of a diesel engine using CARB diesel fuel as configured upon initial marine installation.
- (811) Prior to January 1, 2023, "Barge" means a vessel having a flat-bottomed rectangular hull with sloping ends, and built with or without a propulsion engine.
- (11.1) On and after January 1, 2023, "Barge" means a vessel either having a flat-bottomed rectangular hull with sloping ends or a vessel used to transport crude oil or petrochemical products, and built without a propulsion engine. Barges include but are not limited to deck barges, derrick or crane barges, dredging

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hopper barges, towed or pushed petrochemical tank barges, or barges operating as part of an ATB combination.

- (12) "Berth" means a vessel's allocated place at a wharf, pier, or dock. For the purpose of this section, berth and slip can be used interchangeably.
- (913) "California Air Resources Board (CARB) Diesel Fuel" means any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in title 13 CCR, sections 2281, 2282, 2284, 2299, and title 17 CCR section 93116.
- (104) "California Baseline" means the mean lower low water line along the California coast, as shown on the following National Oceanic and Atmospheric Administration (NOAA) Nautical Charts as authored by the NOAA Office of Coast Survey, which are incorporated herein by reference:
- (A) Chart 18600, Trinidad Head to Cape Blanco (January 2002);
 - (B) Chart 18620, Point Arena to Trinidad Head (June 2002);
 - (C) Chart 18640, San Francisco to Point Arena (August 2005);
 - (D) Chart 18680, Point Sur to San Francisco (June 2005);
 - (E) Chart 18700, Point Conception to Point Sur (July 2003);
 - (F) Chart 18720, Point Dume to Purisima Point (January 2005); and
 - (G) Chart 18740, San Diego to Santa Rosa Island (March 2007).
- (15) "California Fish and Wildlife License Number" means an identification number assigned by the California Department of Fish and Wildlife, which displayed on vessels on contrasting background in a format of FG 12345.
- (16) "Call Sign Number" means a unique identifier to a vessel containing both characters and numbers most often used in radio transmissions.
- (147) "CARB" means the California Air Resources Board. CARB may also be referred to as "ARB."
- (18) "CARB Approved Emission Control System (CAECS)" means a method of reducing emissions to a satisfactory level for compliance with Title 17, CCR 93130 through 93130.20, which is approved by CARB in this section as providing the same or greater reductions as applied to harbor craft.
- (19) "CARB Diesel Fuel" means any diesel fuel that meets the specifications of vehicular diesel fuel, as defined in Title 13 CCR, Sections 2281 and 2282.

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- (420) "Carbon Monoxide (CO)" is a colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.
- (4321) "Category 1 engine" means any marine engine with a displacement of less than 5.0 liters per cylinder and with a maximum horsepower (hp) rating of 50 hp or greater.
- (4422) "Category 2 engine" means any marine engine with a displacement of 5.0 to less than 30 liters per cylinder.
- (4523) "Category 3 engine" means any marine engine with a displacement of greater than 30 liters per cylinder.
- (4624) "Certified marine engine" means an engine that is certified by U.S. EPA as meeting the requirements of title 40, Code of Federal Regulations (CFR), Part 94 or Part 1042.
- (4725) "Certified nonroad engine" means an engine that is certified by U.S. EPA as meeting the requirements of title 40, CFR, Part 89 or Part 1039.
- (26) "Charter" means an agreement or contract where one person or company rents, leases, hires, or uses commercial harbor craft vessels from another person or company to convey or transport goods or passengers.
- (27) "CHC Reporting System" is a reporting system that may involve a web-based portal, fillable forms or other CARB recommended approach to meeting reporting requirements of this section.
- (4828) "Coast Guard Vessel" means any vessel or boat owned or operated by the U.S. Coast Guard, including, but not limited to, U.S. Coast Guard cutters and patrol boats that are used for law enforcement, defense operations, marine science, search and rescue missions, training missions, coastal surveillance, servicing aids to navigation, and marine environmental response.
- (29) "Commercial Passenger Fishing" (also called "Charter Fishing" or "Sportfishing") means any coastal or offshore vessel used for sport fishing, charter fishing, or any other type of fishing activity where individuals other than the owners or operators of the vessel are onboard the vessel to perform fishing activities. Commercial passenger fishing vessels include but are not limited to operations that provide both day and overnight trips, including those that may voyage periodically in and out of Regulated California Waters to targeting highly migratory species. For the purpose of this section, "Commercial

Passenger Fishing” and “Charter Fishing” and “Sportfishing” vessels are interchangeable and refer to the same vessel category.

(1930) Prior to January 1, 2023, “Compliance Date” means the date by which time a vessel engine must meet the requirements set forth in subsection (e)(6)(C). The “compliance date” for a vessel engine is set forth in Table 7, Table 8, Table 9, or Table 10 in subsection (e)(6)(D), whichever is applicable.

(30.1) On and after January 1, 2023, “Compliance Date” means the date by which time a vessel engine must meet the requirements set forth in subsection (e)(6.1)(C). The “compliance date” for a vessel engine is set forth in Table 12, Table 13, Table 14, or Table 15 in subsection (e)(6.1)(D), whichever is applicable.

(2031) Prior to January 1, 2023, “Crew and Supply Vessel” means a self-propelled vessel used for carrying personnel and/or supplies to and from off-shore and in-harbor locations (including, but not limited to, off-shore work platforms, construction sites, and other vessels).

(31.1) On and after January 1, 2023, “Crew and Supply Vessel” means a self-propelled vessel used for carrying personnel and/or supplies to and from off-shore and in-harbor locations (including, but not limited to, off-shore work platforms, construction sites, islands, and other vessels).

(2432) “Date of Acquisition” means, for a vessel or engine subject to this regulation, the date of purchase as defined by the date shown on the front of the cashed check, the date of the financial transaction, or the date on the vessel or engine purchasing agreement, whichever is earliest of the three dates.

(2233) “Diesel Engine” means an internal combustion, compression-ignition (CI) engine, or pilot 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.

(34) “Diesel Emission Control Strategy (DECS)” refers to a technology that reduces air pollution from diesel engine exhaust before it is emitted into the air.

(35) “Diesel Exhaust Fluid (DEF)” means a liquid reducing agent (other than the engine fuel) used in conjunction with selective catalytic reduction to reduce NOx emissions. Diesel exhaust fluid is generally understood to be an aqueous solution of urea conforming to the specifications of International Organization for Standardization (ISO) 22241.

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- (236) "Diesel Fuel" means any fuel that is commonly or commercially known, sold, or represented by the supplier as diesel fuel, including any mixture of primarily liquid hydrocarbons (HC) - organic compounds consisting exclusively of the elements carbon and hydrogen - that is sold or represented by the supplier as suitable for use in an internal combustion, compression-ignition engine.
- (2437) "Diesel-Fueled" means a diesel engine fueled in whole or part by diesel fuel.
- (2538) "Diesel Oxidation Catalyst (DOC)" means an emission control technology that employs a catalyst to promote oxidation processes in diesel exhaust gases, usually designed to reduce emissions of the organic fraction of diesel particulates, gas-phase HC, and CO.
- (2639) Prior to January 1, 2023, "Diesel Particulate Filter (DPF)" means an emission control technology that reduces diesel PM emissions in engine exhaust gases by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration. On and after January 1, 2023, DPF means a CARB Level 3 Verified Diesel Emission Control Strategy (VDECS).
- (2740) "Diesel Particulate Matter (Diesel PM)" 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.
- (41) "Diesel Engine System" means a system, including diesel engines and diesel particulate filters, used to meet CARB's performance standards set forth in subsection (4.1).
- (2842) "Direct Control" means owning, operating, having a contract, lease, or other arrangement to operate a harbor craft. For facilities, "Direct Control" means to control the affairs of facility operations, which includes but is not limited to collecting payment from independent operators for use of dock space, using facility property to moor, dock, service, or maintain a person's own vessels, and being responsible for the majority of commercial activity at a given location.
- (43) "Disadvantaged Communities (DACs)" are census tracts designated by the California Environmental Protection Agency for the purposes of SB 535 (Health and Safety Code Section 39711) using the most current version of CalEnviroScreen by the Office of Environmental Health Hazard Assessment (OEHHA). DACs include all wharfs, docks, berths, and slips within a port, marina, harbor or other terminal facility if any portion of the facility is located

within a DAC. Additional requirements apply for vessels with a homebase or any regularly scheduled stop within 2 miles of a DAC.

- (2944) "Dredge" means a vessel designed to remove earth from the bottom of waterways, by means of including, but not limited to, a scoop, a series of buckets, or a suction pipe. Dredges include, but are not limited to, hopper dredges, clamshell dredges, or pipeline dredges.
- (45) "Dedicated Emergency Use Vessel" means a vessel that is used to perform fire suppression, police response, or emergency rescue as its primary specified vocation reported to CARB. For the purpose of this section, vessels performing training or certification for, or actual operations in oil spill response, are not dedicated emergency use vessels.
- (46) "Distributed Generation" means electrical power generation technologies, sources, equipment (including but not limited to combustion engines on dock and barge mounted at dock), or methods that produce electricity at or near the place of use. The electricity generated must meet the following emissions standards:
- (A) NO_x emissions no greater than 0.03 gram per kilowatt-hour (g/kW-hr);
 - (B) PM emissions equivalent to the combustion of natural gas with a fuel sulfur content of no more than 1 grain per 100 standard cubic foot;
 - (C) Distributed generation GHG emissions must be grid-neutral; and
 - (D) Ammonia emissions no greater than five parts per million on a dry volume basis (ppmdv), if selective catalytic reduction (SCR) is used.
- (47) "Dock" means the state of being secured to a facility (to dock), or the physical structure to which a vessel can be docked.
- (48) "Engine Family" means an identifier assigned by the United States Environmental Protection Agency (U.S. EPA) or CARB to every engine certified to Tier 1 emission standards or higher. Engine family names generally contain either 11 to 12 digits for off-road or marine certified engines.
- (49) "Emergency Operation" means performing emergency response duties such as responding to a stricken vessel, participating in activities as required by a Vessel Mutual Assistance Plan (VMAP), supporting an emergency operation or unannounced drills that are part of California Department of Fish and Wildlife (CDFW) Office of Spill Prevention and Response (OSPR) validation of Oil Spill Contingency Plans (C Plans), providing response effort to an oil or petrochemical spill event, or use of combustion engines onboard vessels

meeting ZEAT requirements in the event of an electrical utility power outage. The operating hours within Regulated California Waters during emergency operations can be excluded from performance requirements for ZEAT in subsection (e)(5.1), and annual limits set forth in subsection (e)(7) and (e)(6.1)(E)(4) if documented according to recordkeeping requirements in subsection (m)(19)(C) and reported according to subsection (n.1).

(3050) "Emission Control Strategy" means any device, system, or strategy employed to reduce emissions from an engine, including, but not limited to, diesel oxidation catalysts, selective catalytic reduction systems, diesel particulate filters, alternative diesel fuels, water emulsified fuels, and any combination of the above.

(51) "Escort Tugboats" means a tugboat with a primary vocation involving intercepting and escorting ATBs, or any ocean-going vessel entering or departing Regulated California Waters with the purpose of providing maneuvering or stopping assistance in case of loss of propulsion or steering power while in-route to or from docks and terminals. Escort tugs will typically work with ship assist harbor tugs to dock or undock their escorted ATBs or ocean-going vessels. Escort tugs may also stay with ATBs or ocean-going tanker vessels while they are offloading or loading petrochemical product for fire suppression assistance or emergency undocking. Certificated escort tugboats are compliant with the requirements of Title 14, California Code of Regulations, Subdivision 4 Office of Spill Prevention and Response, Chapters 1-8.

(3452) "Estuarine Waters" means an arm of the sea or ocean that extends inland to meet the mouth of a river.

(3253) Prior to January 1, 2023, "Excursion Vessel" means a self-propelled vessel that transports passengers for purposes including, but not limited to, dinner cruises; harbor, lake, or river tours; scuba diving expeditions; and whale watching tours. "Excursion Vessel" does not include crew and supply vessels, ferries, and recreational vessels.

(53.1) On and after January 1, 2023, "Excursion Vessel" means a self-propelled vessel that transports passengers for purposes including, but not limited to, dinner cruises; harbor, lake, bay, or river tours; scuba diving, or parasailing expeditions; any type of for-hire charters for pleasure purposes; and whale watching tours. "Excursion Vessel" does not include crew and supply vessels, ferries, and recreational vessels.

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- (~~33~~54) "Executive Officer" means the Executive Officer (E.O.) of the California Air Resources Board or his/her designee.
- (55) "Facility" means, but is not limited to, any port, marine terminal, oil terminal, marina, harbor, and land with docks that accepts payment for allowing a commercial harbor craft to dock or moor.
- (56) "Facility Owner" means any person, company, municipality, or port authority that owns the property of the facility. "Facility Owner" is interchangeable with "Land Owner" and "Property Owner". In some cases including but not limited to port authorities, "facility owner" may also be the "facility operator".
- (57) "Facility Operator" means any person or company in direct control of daily facility operations and if applicable, responsible for the collection of commercial harbor craft vessel operators compensation to dock or moor. "Facility Operator" is interchangeable with the "Tenant" or "Facility Tenant".
- (~~34~~58) "Family Emission Limit (FEL)" means an emission level that is declared by the manufacturer to serve in lieu of an emission standard for certification purposes and for the averaging, banking, and trading program, as defined in title 13, California Code of Regulations, section 2423 or 40 CFR Parts 89.112(d), or 1039.101, as they existed on April 27, 2010.
- (~~35~~9) Prior to January 1, 2023, "Ferry" means a harbor craft having provisions only for deck passengers or vehicles, operating on a short run, on a frequent schedule between two points over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel.
- (59.1) On and after January 1, 2023, "Ferry" means a harbor craft having provisions only for deck passengers or vehicles, operating between two points over the most direct water route, and offering a public service of a type normally attributed to a bridge or tunnel. "Ferry" also includes vessels operated by public or private companies to transport passengers commercially, on both regularly scheduled or on-demand basis, which is not for pleasure. Ferry vessels include, but are not limited to, vessels commonly referred to as water taxis and any vessel subject to Vessel Common Carrier requirements set forth by the California Public Utilities Commission.
- (~~36~~60) Prior to January 1, 2023, "Fishing Vessel" means a self-propelled vessel that is either:

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- (A) a commercial vessel dedicated to the search for, and collection of, fish for the purpose of sale at market or directly to a purchaser(s), or
- (B) a charter vessel used for hire by the general public and dedicated to the search for and collection of, fish for the purpose of general consumption.

(60.1) On and after January 1, 2023, "Fishing Vessel" (also called "Commercial Fishing Vessel") means a self-propelled vessel that is a commercial vessel dedicated to the search for, and collection of, fish for the purpose of sale at market or directly to a purchaser(s). For the purpose of this section, "fishing vessel" and "commercial fishing vessel" are used interchangeably, and are separate from "commercial passenger fishing vessels".

~~(3761)~~ Prior to January 1, 2023, "Fleet" means the total number of harbor craft owned, rented, or leased by an owner or operator in an air district or distinct locale within Regulated California Waters or the statewide population of a specific vessel type.

(61.1) On and after January 1, 2023, "Fleet" means the total number of harbor craft owned, rented, chartered, or leased by an owner or operator in an air basin or distinct locale within Regulated California Waters; or, the statewide population of a specific vessel type.

~~(3862)~~ "Fuel Additive" means any substance designed to be added to fuel or fuel systems or other engine-related engine systems such that it is present in-cylinder during combustion.

(63) "Grid Neutral" means emitting no more GHG emissions than if equipment were powered by the California grid as represented in the most recent eGRID Summary Table for State Output Emission Rates as the California carbon dioxide equivalent (CO₂e) emissions rate.

~~(3964)~~ Prior to January 1, 2023, "Harbor Craft" (also called "Commercial Harbor Craft") means any private, commercial, government, or military marine vessel including, but not limited to, passenger ferries, excursion vessels, tugboats, ocean-going tugboats, towboats, push boats, crew and supply vessels, work boats, pilot vessels, supply boats, fishing vessels, research vessels, U.S. Coast Guard vessels, hovercraft, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of ocean-going vessels or recreational vessels.

(64.1) On and after January 1, 2023, "Harbor Craft" (also called "Commercial Harbor Craft") means any private, commercial, government, or military marine vessel

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including, but not limited to, passenger ferries, barge and dredge vessels, excursion vessels, tugboats, ocean-going tugboats, articulated tug barges, petrochemical tank barges, towboats, push boats, crew and supply vessels, workboats, pilot vessels, supply boats, commercial passenger fishing vessels, fishing vessels, research vessels, U.S. Coast Guard vessels, hovercraft, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of ocean-going vessels or recreational vessels.

(4065) Prior to January 1, 2023, "Homeport" means the port in which a vessel is registered or permanently based.

(65.1) "Homebase" means the facility located in Regulated California Waters where a vessel is anchored, docked, or moored the majority of the time within a calendar year.

(66) "Hydrocarbon (HC)" means the hydrocarbon group on which the emission standards are based for each fuel type, as described in 40 Code of Federal Regulations (CFR) §1042.101(d) and §1042.104(a).

(67) "Hydrogen Fueling Infrastructure" means the necessary infrastructure required to safely transfer compressed or liquid hydrogen directly from a truck or on-site storage facility to a commercial harbor craft.

(68) "Idling" means operating main propulsion or auxiliary engines when the net torque generated by the engine is at the operational minimum for the configuration of an engine, powertrain, or other system. Idling typically occurs but is not limited to when the vessel is at dock or stationary in the water.

(69) "International Maritime Organization Number" means an identification number made up of the three letters "IMO" followed by a unique seven-digit number assigned to all ships by IHS Maritime (formerly known as Lloyd's Register-Fairplay) when constructed.

(4470) "In-Use Harbor Craft" means a harbor craft that is not a new harbor craft.

(4271) "In-Use Marine Engine" means a marine engine that is not a new marine engine.

(4372) "Lease" means a contract by which the owner (lessor) of a property, such as a vessel or engine, grants the right to use or occupy the property to another person (lessee) for a specified term and for a specified rent.

(4473) "Level" means, unless the context requires otherwise, one of three categories of CARB-verified diesel emission control strategies as set forth in title 13, CCR, section 2700 et seq.: Level 1 means the strategy reduces engine diesel PM emissions by between 25 and 49 percent; Level 2 means the strategy reduces engine diesel PM emissions by between 50 and 84 percent; and Level 3 means the strategy reduces engine diesel PM emissions by 85 percent or greater, or reduces engine diesel PM emissions to less than or equal to 0.01 grams per brake horsepower-hour (g/bhp-hr).

(4574) "Low use" means the operation of any compression-ignition engine associated with a harbor craft vessel for less than the total annual hours of operation in Regulated California Waters, based on the immediately preceding calendar year, that the E.O. deems ~~it~~ the engine is subject to the in-use requirements in subsection (e). Prior to January 1, 2023, low use hour limit is 80 hours for barge and dredge vessels, and 300 hours for the regulated in-use vessels except barge and dredge vessels; On and after January 1, 2023, low use hour limit is set forth in subsection (e)(7) Table 18.

(4675) "Military Tactical Support" means a vessel that meets military specifications, is owned by the U.S. Department of Defense, the U.S. Coast Guard, the U.S. Military services or its allies, and is used in combat, combat support, combat services support, tactical or relief operations or training for such operations. This category does not include contractors working for the military.

(4776) "Model Year" means the diesel engine manufacturer's annual production period, which includes January 1st of a calendar year, or if the manufacturer has no annual production period, the calendar year.

(77) "Moor" means any permanent structure to which a vessel may be secured.

(4878) "New Harbor Craft" means a harbor craft for which both of the following criteria are true:

- (A) it is built, or its keel is laid, on or after January 1, 2009, and
- (B) the equitable or legal title to the harbor craft has never been transferred to an ultimate purchaser.

Where the equitable or legal title to the harbor craft is not transferred to an ultimate purchaser prior to the harbor craft being placed into service, the harbor craft ceases to be new when it is placed into service. A harbor craft is placed into service when it is used for its functional purposes.

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(4979) "New Marine Engine" means a marine engine for which both of the following criteria are true:

- (A) it is manufactured or imported on or after January 1, 2009, and
- (B) the equitable or legal title to the engine has never been transferred to an ultimate purchaser.

Where the equitable or legal title to the engine is not transferred to an ultimate purchaser prior to the engine being placed into service, the engine ceases to be new when it is placed into service. An engine is placed into service when it is used for its functional purposes.

(80) "Newly Acquired Harbor Craft" means a harbor craft that is new to a person's fleet, including both vessels not previously owned and operated by another person, and in-use vessels previously owned by a person and operated either within or outside of California.

(5081) "Nitrogen Oxides or 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.

(5482) "Non-Methane Hydrocarbons (NMHC)" means the sum of all hydrocarbon (HC) air pollutants except methane.

(5283) "Ocean-going Vessel" means a self-propelled 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 CFR § 679.2, as adopted June 19, 1996;
- (B) a vessel greater than or equal to 10,000 gross tons (GT ITC) per 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.

(84) "Oil Spill Response Vessel" is a vessel including dedicated spill response workboats performing oil spill response cleanup, or other types of vessels contracted to respond to California Department of Fish and Wildlife spill contingency plans utilizing portable clean-up equipment.

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- (85) “Opacity” means the fraction of a beam of light, expressed in percent, which fails to penetrate a plume of smoke.
- (5386) “Operate” means steering or otherwise running the vessel or its functions while the vessel is working, underway, moored, anchored, or at dock.
- (87) “Operator” means a person who operates a vessel under a contract agreement. For the purpose of this definition, a person who charters or rents a vessel is not an operator.
- (5488) “Own” means having all the incidents of ownership, including the legal title, whether or not that person lends, rents, or pledges the vessel; having or being entitled to the possession of a vessel as the purchaser under a conditional sale contract; or being the mortgagor of a vessel.
- (5589) “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).
- (90) “Performance Standards” means PM and NOx emission standards defined by CARB that must be met to comply with the in-use requirements of the CHC regulation and set forth in Table 7, Table 8 and Table 9 in subsection 93118.5(e)(4.1).
- (5691) “Permanently affixed to a harbor craft” means the engine, its fueling system, or its exhaust system is welded or otherwise physically connected to the vessel or other vessel system in such a way that the engine cannot be easily removed for use in a land-based application without modifications.
- (5792) “Person” includes all of the following:
- (A) any person, firm, association, organization, partnership, business trust, corporation, limited liability company, or company;
 - (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 permitted by federal law.
- (93) “Petrochemical Tank Barge” means a non-self-propelled double-hull petrochemical tank barge constructed to transport petrochemicals or other combustible or noxious liquid substances (NLS) listed in 46 CFR Subchapter O and designed to either be pushed by a designated tug utilizing a proprietary

retractable pin connection system forming a temporary articulated tug barge combination or towed on a wire by tugboat.

- (94) "Physical constraint" at a terminal means an unavoidable barrier to provide a service due to the layout of a terminal or waterway where a state or federal public agency with jurisdiction over the resources effected by this section has made a safety determination that prevents the use of shore power.
- (5895) "Pilot Vessel" means a vessel designed for, but not limited to, the transfer and transport of maritime pilots to and from ocean-going vessels while such vessels are underway, at anchor, or at dock.
- (596) "Port" means any facility used for water-borne commerce. "Port" includes, but is not limited to, facilities also known as "marine terminals" and "roadsteads."
- (6097) "Portable CI Engine" means a compression-ignition (CI) engine designed and capable of being carried or moved from one location to another. Indicators of portability include, but are not limited to, wheels, skids, carrying handles, dolly, trailer, or platform. Portable engines are not self-propelled.
- (6198) "Portable Equipment Registration Program (PERP)" means the statewide program designed to promote the use of clean portable engines and equipment units in California, as provided for in title 13, CCR, sections 2450 through 2465. Once registered in the program, portable engines and equipment units can operate throughout the State without being required to obtain individual permits from each air pollution control or air quality management district in which they operate.
- (6299) "Pre-Tier 1 Engine" means an engine that was built before the effective date of U.S. EPA's Tier 1 marine engine emission standards (Tier 1 marine standards), as set forth in 40 CFR 94, or U.S. EPA's Tier 1 emission standards for nonroad compression ignition engines, as set forth in 40 CFR 89.
- (63100) "Propulsion Engine or Main Engine" means an engine that provides power to move a vessel through the water or directs the movement of a vessel. "Propulsion engine" is interchangeable with "Main" engine.
- (64101) "Purchase Date" means the date shown on the front of the cashed check; the date of the financial transaction; or the date on the engine or harbor craft purchase, rental, or lease agreement, whichever is earliest.

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~~(65102)~~“Push Boat” means any self-propelled vessel engaged in or intending to engage in the service of pulling, pushing, or hauling along side barges or other vessels, or any combination of pulling, pushing, or hauling along side barges or other vessels. “Push boats” is interchangeable with “towboats.”

(103) “Rapid Charging Infrastructure” means infrastructure capable of charging commercial harbor craft on-board battery energy storage systems utilized with plug-in hybrid or battery electric propulsion systems to a minimum of 80 percent state-of-charge within the timespans available between the vessel’s posted schedule of trip arrival and departure times to allow efficient competitive operation.

(104) “Rebuild” means overhaul an engine using both new and re-conditioned parts while following repair procedures that have been approved by the manufacturer. When engine repairs require replacement of the engine block, the engine is considered to be repowered, not rebuilt.

~~(66105)~~Prior to January 1, 2023, “Recreational Vessel” means a vessel that is intended by the vessel manufacturer to be operated primarily for pleasure or leased, rented, or chartered to another for the latter’s pleasure, excluding the following vessels: (1) vessels of less than 100 gross tons that carry more than 6 passengers, (2) vessels of 100 gross tons or more that carry one or more passengers, and (3) vessels used solely for competition.

(105.1)On and after January 1, 2023, “Recreational Vessel” means a vessel that is used solely for personal use, which excludes diesel-powered vessels that are operated as a charter or hired to carry any number of passengers.

~~(67106)~~“Registered Historic Vessel” means a vessel listed in the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966 (16 U.S.C. 470).

~~(68107)~~“Regulated California Waters”, or “RCW”, 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;

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- (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.

~~(69108)~~Prior to January 1, 2023, "Regulated In-Use Vessel" means a vessel that operates as one of the vessel categories subject to in-use engine standards in subsection (e)(6).

(108.1) On and after January 1, 2023, "Regulated In-Use Vessel" means a vessel that operates as one of the vessel categories subject to performance standards in subsection (e)(6.1).

(109) "Repower" means replacing a used engine with a brand new or reconditioned engine meeting current emission standards in effect. Major engine repairs on a damaged engine requiring a new engine block are deemed to be a repower.

(110) "Renewable Diesel or R100" means a diesel fuel substitute produced from non-petroleum renewable sources, including vegetable oils and animal fats. Renewable diesel meets the federal registration requirements for fuels and fuel additives and ASTM specification D975.

~~(70111)~~"Rent" means payment for the use of harbor craft or diesel engine for a specified term.

(112) "Research Vessel" means any vessel subject to requirements of 46 CFR Subchapter U, which include but are not limited to vessels with highly advanced mobile research stations, and vessels that provide stable platforms from which explorers can deploy equipment, or divers, or submersibles.

~~(7113)~~"Retirement" means the act of taking an engine or harbor craft out of service (i.e., to "retire") so that it subsequently never again operates in any of the Regulated California Waters. "Retirement" does not include an engine or harbor craft that is sold for use outside California then subsequently operated in any of the Regulated California Waters.

- (114) “Retrofit” means to install new or modified parts or equipment in or onto an in-use (non new) vessel or engine.
- (72115) “SCAQMD” means the South Coast Air Quality Management District, as defined in Health and Safety Code section 40410 et seq. and described in section 60104, title 17, California Code of Regulations, and shall include all waters subject to the jurisdiction of the SCAQMD.
- (116) “Selective Catalytic Reduction (SCR)” means an advanced active emissions control technology system that injects a liquid-reductant agent through a special catalyst into the exhaust stream of a diesel engine to control NOx emissions.
- (117) “Ship Assist Tugboat” means a highly maneuverable harbor tug with azimuthing stern drive (ASD) or Voith-Schneider Cycloidal propulsion commonly referred to as a “tractor-tug” type tugboat and having a primary vocation of assisting ATBs and ocean-going vessels while docking and undocking. Ship assist tugboats often work together with larger escort tugs at docking ocean-going vessels arriving with their respective escort tugs.
- (118) “Shore Power” (also called “Harbor Craft Shore Power”) refers to electrical power provided by either the electric utility or distributed generation to a vessel at dock that can be used to provide house load or any other on-board auxiliary power normally provided by onboard diesel generators.
- (119) “Short Run Ferry” means a vessel dedicated to provide regularly scheduled round-trip ferry service between two points that are less than 3 nautical miles apart. Vessels that make multiple stops in a single round-trip, where more than half of the single trip lengths are less than 3 nautical miles, and the longest single trip length is less than 6 nautical miles, are considered short run ferries. Vessels that provide ferry round-trip service between two points that are less than 3 nautical miles apart, but provide less than 20 percent of the service trips between those two points during a given calendar year, are not considered short run ferries.
- (120) “Slip” means the same as berth.
- (73121) “Supply Vessel” means a self-propelled vessel used for carrying crew and supplies to and from off-shore and in-harbor locations including, but not limited to, off-shore work platforms, construction sites, islands, and other vessels.

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(74122) "Swing Engine" means an engine maintained at a dockside location for use in a vessel or fleet of vessels which can be installed as a replacement for an engine that has been removed from a vessel for repair or routine maintenance. The removed engine may then become the swing engine once repair or maintenance has been completed.

(75123) "Take Out of Service" means the act of dry-docking, mooring, anchoring, or otherwise tying up a harbor craft at dock to conduct maintenance, repairs, replacements, or upgrades such that the vessel cannot be operated in Regulated California Waters while such acts are conducted on the vessel.

(76124) Prior to January 1, 2023, "Tank Barge" means a non-self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

(124.1) On and after January 1, 2023, "Tank Barge" means a non-self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue. Tank barges include both petrochemical tank barges and other liquid cargo barges, such as those performing fuel bunkering services.

(77125) "Tank Vessel" or "Tanker" means a self-propelled vessel constructed or adapted primarily to carry, or that carries, oil or hazardous material in bulk as cargo or cargo residue.

(78126) "Temporary emergency rescue/recovery vessel" means a self-propelled vessel that performs duties including, but not limited to, policing harbor areas, fire fighting, rescue operations, oil spill prevention, and on-water oil removal ~~whose homeport that is not within California and is brought into California for the immediate use of emergency rescue or recovery and leaves returns to its homeport outside of California at the conclusion of its emergency~~ rescue/recovery mission.

(79127) Prior to January 1, 2023, "Temporary replacement vessel" means a self-propelled vessel that is brought into service to temporarily replace a California vessel that has been temporarily taken out of service. For purposes of this section, "temporary replacement vessel" includes only the following:

- (A) vessels that are used in the SCAQMD but have a homeport in California outside of the SCAQMD; and
- (B) vessels that are used anywhere in California, including the SCAQMD, but have a homeport outside of California.

(127.1) On and after January 1, 2023, “Temporary replacement vessel” means a self-propelled vessel that is brought into service to temporarily replace a California vessel that has been temporarily taken out of service.

(80128) “Tier 1 Marine Engine Emission Standards (Tier 1 marine standards)” means the U.S. EPA marine engine Tier 1 emission standards, as promulgated by U.S. EPA and set forth in “Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW” (64 Federal Register (FR) 73299-73373, December 29, 1999)(40 CFR Part 94), both of which are incorporated herein by reference. The standards from 40 CFR Part 94 are summarized in Table 1. In the event of a conflict between a Tier 1 marine standard in this section and its corresponding standard in 40 CFR Part 94, the standard in 40 CFR Part 94 controls.

Table 1: U.S. EPA Tier 1 Marine Engine Emission Standards

Category	Power (kilowatt (kW)) & Displacement (liters/cylinder (l/cyl))	Engine Speed (Revolutions per minute (rpm))	Tier 1 Model Year	PM (g/bhp-hr)	NO _x (g/bhp-hr)*	CO (g/bhp-hr)
1, 2, 3, including Recreational	≥ 37 kW & ≥ 2.5 l/cyl	rpm ≥ 2000	2004	-	7.3	-
		130 ≤ rpm <2000	2004	-	33.57 x rpm ^{-0.2}	-
		rpm <130	2004	-	12.7	-

(40 CFR Part 94)

*converted emission standards from 40 CFR 94, which are expressed in grams per kilowatt-hour (g/kW-hr) to g/hp-hr by the following: $g/kW-hr * (0.746) = g/hp-hr$.

(8129) “Tier 2 Marine Engine Emission Standards (Tier 2 marine standards)” means the U.S. EPA marine engine Tier 2 emission standards, as promulgated by U.S. EPA and set forth in “Control of Emissions of Air Pollution from New Marine Compression-Ignition Engines at or Above 37 kW” (64 FR 73299-73373, December 29, 1999)(40 CFR Part 94), both of which are incorporated herein by reference. In the event of a conflict between a Tier 2 marine standard in this section and its corresponding standard in 40 CFR Part 94, the standard in 40 CFR Part 94 controls.

**Table 2: U.S. EPA Tier 2 Marine Engine Emission Standards for
NO_x + HC, PM, and CO**

Category	Displacement (Disp.) (liters/cylinder)	Date	NO _x +HC (g/bhp-hr)*	PM (g/bhp-hr)*	CO (g/bhp-hr)*
1	Disp. < 0.9 and power ≥ 50 hp*	2005	5.6	0.30	3.7
	0.9 ≤ Disp. < 1.2	2004	5.4	0.22	3.7
	1.2 ≤ Disp. < 2.5	2004	5.4	0.15	3.7
	2.5 ≤ Disp. < 5.0	2007	5.4	0.15	3.7
2	5.0 ≤ Disp. < 15	2007	5.8	0.20	3.7
	15 ≤ Disp. < 20 (power < 4424 hp*)	2007	6.5	0.37	3.7
	15 ≤ Disp. < 20 (power ≥ 4424 hp*)	2007	7.3	0.37	3.7
	20 ≤ Disp. < 25	2007	7.3	0.37	3.7
	25 ≤ Disp. < 30	2007	8.2	0.37	3.7

(40 CFR Part 94)

*converted emission standards and maximum power rating from 40 CFR 94, which are expressed in g/kW-hr and kW to g/hp-hr and hp, respectively, by the following: g/kW-hr (0.746) = g/hp-hr or kW (1.34) = hp

(82130) "Tier 3 Marine Engine Emission Standards (Tier 3 marine standards)" means the U.S. EPA marine engine Tier 3 emission standards, as promulgated by U.S. EPA and set forth in "Final Rule: Control of Emissions of Air Pollution from Locomotive and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder" (73 FR 25245 et seq., May 6, 2008) (40 CFR Part 1042), both of which are incorporated herein by reference. The standards from 40 CFR Part 1042 are summarized in Table 3, Table 4, and Table 5. In the event of a conflict between a Tier 3 marine standard in this section and its corresponding standard in 40 CFR Part 1042, the standard in 40 CFR Part 1042 controls. [Note: No Tier 3 marine standards apply for commercial Category 1 engines at or above 3700 kW. See "Tier 4 Marine Engine Emission Standards" for the standards that apply to these engines.]

**Table 3: U.S. EPA Tier 3 Marine Standards for Marine Diesel
Category 1 Commercial Standard Power Density Engines below 3700 kW**

Rated kW	L/Cylinder	PM g/bhp-hr ^e	NO _x + HC ^d g/bhp- hr ^e	Model Year
19 to < 75 kW	<0.9 ^a	0.22	5.6	2009
		0.22 ^b	3.5 ^b	2014
75 to <3700 kW	<0.9	0.10	4.0	2012
	0.9 - <1.2	0.09	4.0	2013
	1.2 - <2.5	0.08 ^c	4.2	2014
	2.5 - <3.5	0.08 ^c	4.2	2013
	3.5 - <7.0	0.08 ^c	4.3	2012

- (a) <75 kW engines at or above 0.9 L/cylinder are subject to the corresponding 75-3700 kW standards.
- (b) Option: 0.15 g/bhp-hr PM / 4.3 g/bhp-hr NO_x+HC in 2014.
- (c) This standard level drops to 0.07 g/bhp-hr in 2018 for <600 kW engines.
- (d) Tier 3 NO_x+HC standards do not apply to 2000-3700 kW engines.
- (e) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW-hr to g/hp-hr by the following: g/kW-hr (0.746) = g/hp-hr.

**Table 4: U.S. EPA Tier 3 Marine Standards for Marine Diesel
Category 1 Recreational and Commercial High Power Density
Engines below 3700 kW**

Rated kW	L/Cylinder	PM g/bhp- hr ^c	NO _x + HC g/bhp- hr ^c	Model Year
19 to <75 kW	<0.9 ^a	0.22	5.6	2009
		0.22 ^b	3.5 ^b	2014
75 to <3700 kW	<0.9	0.11	4.3	2012
	0.9 - <1.2	0.10	4.3	2013
	1.2 - <2.5	0.09	4.3	2014
	2.5 - <3.5	0.09	4.3	2013
	3.5 - <7.0	0.08	4.3	2012

- (a) <75 kW engines at or above 0.9 L/cylinder are subject to the corresponding 75-3700 kW standards.
- (b) Option: 0.15 g/bhp-hr PM / 4.3 g/bhp-hr NO_x+HC in 2014.
- (c) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW-hr to g/bhp-hr by the following: g/kW-hr (0.746) = g/bhp-hr.

Table 5: U.S. EPA Tier 3 Marine Standards for Marine Diesel Category 2 Engines below 3700 kW^{a,b}

L/Cylinder	Rated kW	PM g/bhp- hr ^c	NO _x +HC g/bhp- hr ^c	Model Year
7 - <15	<2000	0.10	4.6	2013
	≥2000	0.10	5.8	2013
15 - <20 ^a	<2000	0.25	5.2	2014
20 - <25 ^a	<2000	0.20	7.3	2014
25 - <30 ^a	<2000	0.20	8.2	2014

- (a) No Tier 3 marine standards apply for Category 2 engines with per-cylinder displacement above 15.0 liters if maximum engine power is at or above 2000 kW. See “Tier 4 Marine Engine Emission Standards” for the standards that apply for these engines.
- (b) For Category 2 engines at or above 1400 kW, optional Tier 3 and Tier 4 standards are available with some manufacturer restrictions, PM / NO_x+HC at 0.10 / 5.8 g/bhp-hr in 2012, with Tier 4 standards in 2015.
- (c) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW-hr to g/bhp-hr by the following: $g/kW-hr * (0.746) = g/bhp-hr$.

(83131) “Tier 4 Marine Engine Emission Standards (Tier 4 marine standards)” means the U.S. EPA marine engine Tier 4 emission standards, as promulgated by U.S. EPA and set forth in “Final Rule: Control of Emissions of Air Pollution from Locomotive and Marine Compression-Ignition Engines Less Than 30 Liters Per Cylinder” (73 FR 25245 et seq., May 6, 2008) (40 CFR Part 1042), both of which are incorporated herein by reference. Table 6 summarizes the Tier 4 marine standards from 40 CFR Part 1042. In the event of a conflict between a Tier 4 marine standard in this section and its corresponding standard in 40 CFR Part 1042, the marine standard in 40 CFR Part 1042 controls.

Table 6: U.S. EPA Tier 4 Marine Standards for Marine Diesel Category 1 and Category 2 Engines above 600 kW

Rated kW	L/Cylinder	PM g/bhp- hr ^a	NO _x g/bhp- hr ^a	HC g/bhp- hr ^a	Model Year
At or above 3700 kW	<15.0	0.09	1.3	0.14	2014 ^b
	15.0 to <30.0	0.19	1.3	0.14	2014 ^b
	all	0.04	1.3	0.14	2016 ^b
2000 to <3700 kW	all	0.03 ^d	1.3	0.14	2016 ^{b,c,d}
1400 to <2000 kW	all	0.03	1.3	0.14	2016 ^{b,c}

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600 to <1400 kW	all	0.03	1.3	0.14	2017
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- (a) Converted emission standards from 40 CFR part 1042, which are expressed in g/kW-hr to g/bhp-hr by the following: $\text{g/KW-hr} (0.746) = \text{g/bhp-hr}$
- (b) Optional compliance start dates may be used within these model years; see 40 CFR part 1042.
- (c) For Category 2 engines at or above 1400 kW, optional Tier 3 and Tier 4 marine standards are available with some manufacturer restrictions, PM / NO_x+HC at 0.10 / 5.8 g/bhp-hr in 2012, with Tier 4 marine standards in 2015.
- (d) The Tier 3 PM standards continue to apply for Category 1 and Category 2 engines with per-cylinder displacements below 15.0 liters in model years 2014 and 2015 only. For Category 2 engines with per-cylinder displacement at or above 15.0 liters, the PM standard is 0.25 g/bhp-hr for engines at or above 2000 kW and below 3300 kW, and 0.20 g/bhp-hr for engines at or above 3300 kW and below 3700 kW, in model years 2014 and 2015 only.

(~~84~~132)“Tier 1 Off-Road or Nonroad Emission Standards (Tier 1 off-road standards)” means an engine subject to the Tier 1 new engine emission standards in Title 13, CCR, Section 2423(b)(1)(A) or Title 40, CFR, Part 89.112(a) as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 1 Family Emission Limits (FEL) listed in Title 13, CCR, 2423(b)(2)(A) or Title 40, CFR, Part 89.112(d), as they existed on April 27, 2010, both of which are incorporated herein by reference.

(~~85~~133)“Tier 2 Off-Road or Nonroad Emission Standards (Tier 2 off-road standards)” means an engine subject to the Tier 2 new engine emission standards in Title 13, CCR, Section 2423(b)(1)(A) or Title 40, CFR, Part 89.112(a) as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 2 FEL listed in Title 13, CCR, 2423(b)(2)(A) or Title 40, CFR, Part 89.112(d), as they existed on April 27, 2010, both of which are incorporated herein by reference.

(~~86~~134)“Tier 3 Off-Road or Nonroad Emission Standards (Tier 3 off-road standards)” means an engine subject to the Tier 3 new engine emission standards in title 13, CCR, Section 2423(b)(1)(A) or Title 40, CFR, Part 89.112(a), as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 3 FEL listed in Title 13, CCR, 2423(b)(2)(A) or Title 40, CFR, Part 89.112(d), as they existed on April 27, 2010, both of which are incorporated herein by reference.

(~~87~~135)“Final Tier 4 Off-Road or Nonroad Emission Standards” means an engine subject to the final after-treatment-based Tier 4 emission standards in Title 13,

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CCR, Section 2423(b)(1)(B) or Title 40, CFR, Part 1039.101, as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 4 FEL listed in Title 13, CCR, 2423(b)(2)(B) or Title 40, CFR, Part 1039.101, as they existed on April 27, 2010, both of which are incorporated herein by reference.

~~(88136)~~“Interim Tier 4 Off-Road or Nonroad Emission Standards” means an engine subject to the interim Tier 4 emission standards (also known as transitional) in Title 13, CCR, Section 2423(b)(1)(B) or Title 40, CFR, Part 1039.101, as they existed on April 27, 2010, both of which are incorporated herein by reference. This also includes engines certified under the averaging, banking, and trading program with respect to the Tier 4 FEL listed in Title 13, CCR, 2423(b)(2)(B) or Title 40, CFR, Part 1039.101, as they existed on April 27, 2010, both of which are incorporated herein by reference.

~~(89137)~~“Total Hydrocarbons (THC)” or “Hydrocarbons (HC)” means the total mass of open chain and cyclic hydrocarbon molecules.

~~(90138)~~“Towboat” means any self-propelled vessel engaged in or intending to engage in the service of pulling, pushing, or hauling along side barges or other vessels, or any combination of pulling, pushing, or hauling along side barges or other vessels.

~~(9139)~~ Prior to January 1, 2023, “Tugboat” means any self-propelled vessel engaged in, or intending to engage in, the service of pulling, pushing, maneuvering, berthing, or hauling along side other vessels, or any combination of pulling, pushing, maneuvering, berthing or hauling along side such vessels in harbors, over the open seas, or through rivers and canals. Tugboats generally can be divided into three groups: harbor or short-haul tugboats, ocean-going or long-haul tugboats, and barge tugboats. “Tugboat” is interchangeable with “towboat” and “push boat” when the vessel is used in conjunction with barges.

(139.1) On and after January 1, 2023, “Tugboat” means any self-propelled vessel engaged in, or intending to engage in, the service of pulling, pushing, maneuvering, berthing, or hauling along side other vessels, or any combination of pulling, pushing, maneuvering, berthing or hauling along side such vessels in harbors, over the open seas, or through rivers and canals. Tugboats generally can be divided into three groups: ship assist and escort tugboats, ocean-going ATB and line towing tugboats, and near-shore pushing and towing tugboats. “Tugboat” is interchangeable with “towboat” and “push boat” when the vessel is used in conjunction with barges. “Line towing” refers to towing another

ocean-going vessel, harbor craft or barge with a trailing tow line as opposed to hauling alongside.

(140) “U.S. Coast Guard Documentation Number” is a national form of registration. Documentation provides conclusive evidence of nationality for international purposes, provides for unhindered commerce between the states, and admits vessels to certain restricted trades, such as coastwise trade and the fisheries.

(~~92~~141) “Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)” means the CARB regulatory procedure codified in title 13, CCR, commencing with section 2700, which is incorporated herein by reference, that engine manufacturers, sellers, owners, or operators may use to verify the reductions of diesel PM or NO_x from in-use diesel engines through the use of a particular diesel emission control strategy.

(~~93~~142) “Verified Diesel Emission Control Strategy (VDECS)” means an emission control strategy, designed primarily for the reduction of diesel PM emissions, which has been verified pursuant to the “Verification Procedure for In-Use Strategies to Control Emissions from Diesel Engines” in title 13, CCR, commencing with section 2700. VDECS can be verified to achieve Level 1 diesel PM reductions (25-49 percent), Level 2 diesel PM reductions (50-84 percent), or Level 3 diesel PM reductions (85 percent or greater). VDECS may also be verified to achieve NO_x reductions.

(~~94~~143) “Vessel” or “Marine Vessel” means any tugboat, tanker, freighter, passenger ship, barge, or other boat, ship, or watercraft, except those used primarily for recreation.

(144) “Vessel Tenant” means a commercial harbor craft vessel which docks or moors for seven (7) or more days in a calendar month at a facility.

(145) “Water Taxi” means a ferry including U.S. Coast Guard uninspected passenger vessels carrying six or less passengers for hire or U.S. Coast Guard inspected passenger vessels that carry seven or more passengers for hire that transits paying passengers to any destination rather than operating over a fixed route and schedule.

(~~95~~146) Prior to January 1, 2023, “Work Boat” means a self-propelled vessel that is used to perform duties such as fire/rescue, law enforcement, hydrographic surveys, spill/response, research, training, and construction (including drilling).

(146.1) On and after January 1, 2023, "Workboat" means a self-propelled vessel that is used to perform any duty not specifically listed by another category of commercial harbor craft, including but not limited to duties such as hydrographic surveys, spill/response, school training, and construction (including drilling). Workboat can include vessels owned by public, private, and not-for-profit organizations.

(147) "Zero-Emission Capable Hybrid Vessel" means a commercial harbor craft utilizing a hybrid power system with two or more on-board power sources, one or more of which is approved by CARB's E.O. to be capable of providing a minimum of 30 percent of vessel power required for main propulsion and auxiliary power operation with zero tailpipe emissions when averaged over a calendar year.

(148) "Zero-Emission Infrastructure" means installed dockside infrastructure necessary to support operation of a zero-emission commercial harbor craft calling on that port, terminal, or facility. For example, high-power battery charging equipment capable of charging batteries, and on-dock hydrogen fueling and storage tanks.

(149) "Zero-Emission" means a propulsion system, auxiliary power system, and/or vessel utilizing a zero-emission propulsion and auxiliary power system that has no tailpipe exhaust emissions other than water vapor or diatomic nitrogen from the onboard source(s) of power.

(150) "ZEAT" refers to Zero-Emission and Advanced Technology, which collectively includes zero-emission capable hybrid, and zero-emission vessels.

(e) Fuel Use and Engine Emission Requirements.

[Note: The plain English narrative in this overview is intended as a convenient guide for the reader and in no way adds, deletes, modifies, or otherwise affects the legal requirements and substantive provisions specified in subsection (e) or any other part of this section. Subsection (e) sets forth the various fuel and emission requirements for harbor craft subject to this regulation, and can be broken down as follows:

- Subsection (e)(1) specifies low sulfur fuel use requirements that apply to all harbor craft, new and in-use.
- Subsection (e)(2) specifies the requirement for installing hour-meters on all harbor craft, new and in-use.

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- Subsection (e)(3) establishes requirements that apply to transactions involving new engines to be installed on in-use vessels, including a limited 6-month “sell-through” provision for non-complying engines, and engine replacement in cases where a compliant engine meeting the required physical or performance characteristics is not available.
- Subsection (e)(4) sets forth requirements that apply to newly acquired new harbor craft, including ferries.
- Subsection (e)(5) sets forth requirements that apply only to newly acquired new ferries, above and beyond those established in subsection (e)(4). These provisions include requirements for applying Best Available Control Technology (BACT) to new ferries and their engines.
- Subsection (e)(6) is the key provision of this regulation, as it achieves emission reductions by requiring the eventual replacement or cleanup of engines in the fleet of in-use ferries, excursion vessels, tugboats, towboats, push boats, crew and supply vessels, and barge and dredge vessels. This subsection requires that owners and operators eventually replace or otherwise bring into compliance with the specified engine standards all of their pre-Tier 1 and Tier 1-certified engines in their in-use vessels by the dates shown in the specified compliance schedules. The compliance dates are designed to clean up the fleet’s oldest and dirtiest engines first, while giving more time for relatively newer, Tier 1 engines to be upgraded or replaced. Vessels (ferries, excursion vessels, tugboats, and towboats) with their homeport in the SCAQMD have an accelerated compliance schedule to reflect that district’s greater need for expedited emission reductions. The compliance schedules are grouped by vessel type, location of the vessel’s homeport, the engine’s model year, and the engine’s annual hours of operation.
- Subsection (e)(6)(E) provides for a limited set of circumstances under which the E.O. may grant short extensions to the compliance dates if warranted.]

(1) *All Harbor Craft – Low Sulfur Fuel Use Requirement* (*Applicable Until December 31, 2022*).

Beginning January 1, 2009, a person subject to this section may only fuel a diesel engine on a harbor craft with one of the following:

- (A) CARB diesel fuel; or
- (B) an alternative diesel fuel as defined in subsection (d)(2); or
- (C) any alternative diesel fuel that does not meet subsection (e)(1)(B) above but is certified by CARB as meeting the requirements of the Verification Procedure; or

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- (D) CARB diesel fuel used with fuel additives that meet the requirements of the Verification Procedure; or
- (E) any combination of subsection (e)(1)(A) through (D) above; or
- (F) if a harbor craft subject to this section is traveling from a port located outside of California, and that port does not have any fuels listed in subsections (e)(1)(A) through (E), that vessel's diesel engines can be fueled with either: U.S. EPA on-road diesel fuel meeting the specifications contained in 40 CFR §§ 80.500 et seq., as they existed on April 27, 2010, or U.S. EPA nonroad diesel fuel meeting the specifications contained in 40 CFR 80.29 as it existed on April 27, 2010, and 69 FR 38958 (June 29, 2004). The vessel owner or operator must retain records documenting the fuel purchase, the location and the name of the non-California port, and its lack of availability of fuels listed in subsections (e)(1)(A) through (E) on-board the vessel for a minimum of one year after the purchase of the fuel, and must make such records available upon the request of the Executive Officer.

(2) *All Harbor Craft – Installation and Use of Non-Resettable Hour Meters.*

Beginning January 1, 2009, a person subject to this section may not operate a harbor craft without an installed and properly operating, non-resettable hour meter, which accurately measures the number of hours an engine operates. The hour meter must be installed on each diesel engine on the vessel in a manner that allows reasonable personnel access to the hour meter without impediment. Beginning January 1, 2023, in the event the hour meter fails to operate properly or is replaced, a person subject to this subsection must within 30 days, replace the hour meter and report to CARB the date the hour meter stopped working, the date it was replaced, and the current hour readings of both the original and replacement meter.

(3) *All In-Use Harbor Craft – Requirements for Newly Acquired Engines (Applicable Until December 31, 2022).*

During the time period beginning January 1, 2009 and ending December 31, 2022, a person subject to this section may not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new or in-use diesel engine for an in-use harbor craft, which is intended to operate or actually operates in any of the Regulated California Waters, unless that engine on the date of acquisition:

- (A) is certified to meet the Tier 2 or Tier 3 marine standards in effect on that date for a new engine of the same power rating and displacement. The newly acquired engine is not required to meet the Tier 4 marine standards

unless it is replacing an engine on the in-use vessel that was certified as meeting Tier 4 marine standards. Engines certified to meet the Tier 2, Tier 3, or interim Tier 4 off-road standards in effect on the date of acquisition for a new engine of the same power rating and displacement may only be acquired for use as an auxiliary or propulsion engine on harbor craft if the engine or vessel manufacturer has complied with 40 CFR § 1042.605 (*Marinized land-based engines already certified to other standards for nonroad or heavy-duty highway engines for marine use*), as it existed on April 27, 2010; or

- (B) is newly acquired within the allowable 6 month “sell-through” period, as set forth in this paragraph. For purposes of this paragraph only, the allowable sell-through period runs through 6 months after the date the Tier 2, Tier 3, or Tier 4 marine standards or Tier 3, interim Tier 4, or final Tier 4 off-road standards have come into effect for a new engine of the same power rating and displacement as the engine being replaced on the in-use vessel. Engines that are subsequently sold, supplied, offered for sale, or otherwise newly acquired after the 6 month sell-through period are subject to the requirements specified in paragraph (A) of this subsection, even if the engine was previously newly acquired within the 6 month sell-through period; or
- (C) is replacing an engine that is non-functioning due to equipment failure, and the E.O. has determined, pursuant to the provisions of 40 CFR § 1042.615 engine replacement exemption, as it existed on April 27, 2010, that no engine certified to the current standards is produced by any manufacturer with the appropriate physical or performance characteristics to repower the vessel. In such event, an alternate engine may be acquired for the replacement. Pursuant to 40 CFR § 1042.615, a separate determination, addressing each tier of emission standards that is more stringent than the emission standards for the engine being replaced must be made. For example, if the engine being replaced was built before the Tier 2 standards applied, and engines of that size are currently subject to Tier 3 standards, a person must consider whether any Tier 2 or Tier 3 engines have the appropriate physical and performance characteristics for replacing the old engine. If a Tier 2 engine is determined to have the appropriate physical and performance characteristics, it may be selected as the replacement engine. Documentation of these determinations must be supplied to the E.O. and the E.O.’s determination must be obtained before an engine replacement is made pursuant to this provision.

- (4) *All New Harbor Craft (Including All New Ferries) – Requirements for Newly Acquired Vessels (Applicable Until December 31, 2022).*

During the time period bBeginning January 1, 2009 and ending December 31, 2022, a person subject to this section may not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new harbor craft for use in any of the Regulated California Waters unless each diesel propulsion and auxiliary engine on the vessel meets the applicable Tier 2, Tier 3, or Tier 4 marine standards in effect on the date of vessel acquisition. Auxiliary or propulsion engines meeting the applicable Tier 2, Tier 3, interim Tier 4, or Final Tier 4 off-road standards in effect on the date of vessel acquisition may be sold, purchased, offered for sale, leased, rented, imported, or otherwise acquired for use if the engine or vessel manufacturer has complied with 40_CFR 1042.605 (*Marinized land-based engines already certified to other standards for nonroad or heavy-duty highway engines for marine use*), as it existed on April 27, 2010. Diesel propulsion engines in new ferries with a capacity to transport more than 75 passengers in Regulated California Waters must also meet the requirements specified in subsection (e)(5) below.

- (5) *Selected New Ferries Only – Additional Requirements for All Newly Acquired Propulsion Engines (Applicable Until December 31, 2022).*

(A) During the time period bBeginning January 1, 2009 and ending December 31, 2022, any person who owns or operates a new ferry with the capacity to transport 75 or more passengers and that is used in any of the Regulated California Waters must demonstrate that each diesel propulsion engine that is certified to either the Tier 2 or Tier 3 marine standards will be operated in conjunction with the use of Best Available Control Technology (BACT) as determined and pre-approved by the E.O. pursuant to this provision.

(B) For purposes of this section, "BACT" is the diesel emission control strategy (DECS), whether verified or unverified pursuant to 13 CCR section 2700 et seq., that is determined by the E.O. as meeting all of the following criteria:

1. it provides or is expected to continuously provide the greatest reduction feasible of NO_x or diesel PM when used with the ferry's propulsion diesel engine;
2. the use of BACT does not result in an increase of 10 percent or more of any air pollutant, including NO_x and diesel PM, relative to the engine's emissions of that air pollutant without the use of BACT; and

3. either the DECS manufacturer or an authorized dealer of the DECS determines or otherwise agrees with the E.O. that use of the DECS on or with the new ferry's propulsion engine(s) would not invalidate or otherwise adversely affect the propulsion engine's original warranty.

For purposes of this section, DECS may include, but is not be limited to, exhaust treatment controls and the use of alternative fuels or fuel additives.

- (C) The E.O. shall determine the appropriate level of BACT and specify such BACT in an Executive Order granting such approval. Applications to comply with the requirements of paragraph (A)2 by using BACT must follow the application and review procedure set forth below:

1. Application Process.

For all new ferries for which the keel is laid on or after January 1, 2009, the application for BACT approval must be submitted in writing to the E.O. for evaluation before the keel is laid. The BACT application must contain, at a minimum, the following information:

- a. the applicant company's name, address, and contact information;
- b. information specific to the harbor craft and engine(s) on which BACT will be used, including the vessel name and identification number(s); engine make, model, and serial numbers; and all other information that uniquely identify the engine;
- c. certification documentation, engineering calculations, emissions test data, or other information that establishes the diesel PM and NO_x emissions of the engine in combination with the proposed BACT. Emissions and emission reduction estimates must include both diesel PM and NO_x emissions and be expressed in grams per brake horsepower-hour (g/bhp-hr) unless otherwise specified by the E.O. Information submitted pursuant to this provision will be used as follows:
 - i. The E.O. shall use the information to compare the emissions resulting from the proposed use of BACT with the emissions quantified in BACT determinations previously approved by the E.O.;

- ii. If there are no previous BACT determinations available for comparison, the E.O. shall use CARB staff's best engineering judgment to determine if the proposed BACT provides the greatest feasible reduction of diesel PM or NO_x; and
 - iii. The E.O. may require the applicant to submit additional emissions data for other air pollutants if the E.O. believes that the proposed use of BACT may increase any air pollutant by 10 percent or more relative to the engine emissions without the proposed BACT; and
 - d. the proposed recordkeeping, reporting, monitoring, and testing procedures that the applicant plans to use to demonstrate continued effectiveness of the BACT.
2. E.O. Review and Final Decision-Making Process.
- a. Within 15 days after receiving a BACT application, the E.O. shall notify the applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification must identify the application's deficiencies. The E.O. shall have an additional 15-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the E.O. from requesting additional information from the applicant, during any part of the BACT application process, which the E.O. determines is necessary to evaluate the application.
 - b. Within 30 days of deeming an application complete, the E.O. shall take final action to either approve or deny a BACT application, and the E.O. shall notify the applicant accordingly. If the application is denied or modified, the E.O. shall state the reasons for the denial or modification in the notification. The E.O. shall specify all terms, conditions, and requirements the E.O. believes are necessary for the ferry engine and BACT to operate properly and reduce emissions of air pollutants consistent with this section. The reporting and recordkeeping requirements specific to the use of BACT must include, at a minimum:
 - i. hours of operation for the engine and BACT and fuel usage;
 - ii. usage of any alternative fuels, additives, agents, flow rates, and emission test results;

- iii. maintenance procedures for the engine(s) and its BACT; and
- iv. any other measurements or recordings specified by the E.O.

The E.O. shall make the approval/disapproval notification to the applicant and identification of the approved/disapproved BACT available to the public on CARB's internet site.

3. Post-Approval Vessel, Engine, and BACT Operation.

A person who owns or operates a new ferry with the capacity to transport 75 or more passengers and that is used in Regulated California Waters must maintain operating records and other information in the manner and form specified by the E.O. in the BACT approval and must submit to CARB upon request all records and reports created pursuant to this provision, which must be maintained and retained for CARB inspection a minimum of three years after the records or reports were created.

(6) *In-Use Engines and Vessels – Schedules for Meeting Tier 2 or Tier 3 Standards (Applicable Until December 31, 2022).*

(A) *For Pre-Tier 1- and Tier-1 Certified Engines on Ferries, Excursion Vessels, Tugboats, Towboats, Push Boats, Crew and Supply Vessels, and Barge and Dredge Vessels Only.*

1. *Applicability.*

This subsection (e)(6) applies, until December 31, 2022, to any person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use ferry, excursion vessel, tugboat, towboat, push boat, crew and supply vessel, or barge and dredge vessel (in-use regulated category vessel) with a pre-Tier 1- or Tier-1-certified marine or off-road engine operating in any one of the above regulated in-use vessel categories for:

- a. a total of 300 hours per calendar year or more if operating in either ferry, excursion vessel, tugboat, towboat, pushboat, or crew and supply vessel categories, or
- b. a total of 80 hours per calendar year if operating in either barge or dredge vessel categories in Regulated California Waters. This subsection applies to all such engines on all such vessels.

2. *General Requirement.*

a. During the time period beginning After January 12, 2009 and ending December 31, 2022, a person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use ferry, excursion vessel, tugboat, towboat, or push boat with a pre-Tier 1- or Tier-1-certified marine or off-road engine and that operates in any of the above regulated in-use vessel categories may not own, operate, sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an in-use engine, or a vessel with an in-use engine, unless that engine complies with at least one of the compliance methods set forth in subsection (e)(6)(C) by the applicable compliance date. The compliance methods set forth in subsection (e)(6)(C) involve either replacement of the in-use engine with a cleaner engine or demonstrating that the in-use engine already meets specified standards, as set forth below.

b. During the time period beginning After January 12, 2009 and ending December 31, 2022, a person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use crew and supply vessel, or barge and dredge vessel with a pre-Tier 1- or Tier-1-certified marine or off-road engine and that operates in any of the above regulated in-use vessel categories may not own, operate, sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an in-use engine, or a vessel with an in-use engine, unless that engine complies with at least one of the compliance methods set forth in subsection (e)(6)(C) by the applicable compliance date. The compliance methods set forth in subsection (e)(6)(C) involve either replacement of the in-use engine with a cleaner engine or demonstrating that the in-use engine already meets specified standards, as set forth below.

For purposes of this subsection, “applicable compliance date” is either the compliance date, as set forth in subsection (e)(6)(D) for the in-use engine, or the compliance date from subsection (e)(6)(D) for the in-use engine, as extended pursuant to subsection (e)(6)(E), whichever applies and occurs later.

(B) [Reserved for Future Use]

(C) *Compliance Methods.*

1. *Method C1 – Replacement of the in-use engine with a U.S. EPA certified marine or off-road Tier 2 engine or one with a higher certification level (e.g., Tier 3-certified).*

A person may comply under this method by replacing the in-use engine with an engine certified to Tier 2 or Tier 3 marine or off-road engine emission standards as set forth in this paragraph. The replacement engine must meet the U.S. EPA Tier 2 or Tier 3 marine or off-road engine emission standards that would apply to a new engine, of the same size and configuration as the in-use engine, at the time of the applicable compliance date set forth in subsection (e)(6)(D). The replacement engine must meet the provisions of section 93118.5(e)(3).

[Note: For example, if the applicable compliance date is January 1, 2010, and the Tier 2 marine or off-road emission standards would be in effect at that time for a new engine of the same size and configuration as the in-use engine, the replacement would need to meet Tier 2 marine or off-road emission standards. However, if the applicable compliance date is instead January 1, 2013, and the Tier 3 marine or off-road emission standards would be in effect for a new engine of the same size and configuration as the in-use engine, the replacement engine would need to meet Tier 3 marine or off-road emission standards.]

Once the in-use engine has been replaced with an engine that is U.S. EPA-certified to meet Tier 2 or Tier 3 marine or off-road emission standards, as set forth above, the engine is deemed to be in compliance with this subsection (e)(6) and no further replacements of this engine are required under this subsection. Tier 3-certified marine or off-road engines may be used as the replacement engine to comply with this paragraph, even if Tier 4-certified marine or off-road emission engines become available by the applicable compliance date;

2. *Method C2 – Demonstrate to the E.O.'s written satisfaction that the in-use engine already meets the Tier 2 marine standards or Tier 2 off-road standards for auxiliary or propulsion engines greater than 50 hp or less than 75 hp, or greater than 750 hp that apply or would apply to new engines on the date the Tier 2 marine or off-road standards became effective.*

- a. A person may comply under this method by demonstrating to the E.O.'s written satisfaction that:
 - i. the in-use engine already meets the Tier 2 marine standards or Tier 2 off-road standards for engines greater than 50 hp or less than 75 hp, or greater than 750 hp,
 - ii. which apply to new engines of the same power rating and displacement as the in-use engine.
- b. This compliance method is available only if the person makes the required demonstration before the date Tier 3 marine or off-road emission standards become effective for new engines of the same size and configuration as the in-use engine. The person may rebuild the in-use engine to a cleaner standard or implement a diesel emission control strategy to aid in meeting these standards. [Note: For example, if the Tier 3 marine or off-road emission standards would have become effective on January 1, 2015 for a new engine of the same size and configuration as the in-use engine, the person would need to provide the Tier 2-compliance demonstration to the E.O.'s written satisfaction by January 1, 2015.]
- c. For purposes of the demonstration, the person may, upon approval by the E.O., rely on any source of reliable and credible information, including but not limited to, any of the following:
 - i. the results from using the test method specified in section (j) or an alternative method approved by the E.O.;
 - ii. the in-use engine manufacturer's certification test data or other emissions test data for that in-use engine;
 - iii. emissions test data derived from another in-use engine that is configured and used in a substantially similar way to the in-use engine;
 - iv. emissions test data used to meet the regulatory requirements of CARB's Verification Procedure for the non-verified emission control strategy implemented; or
 - v. emissions test data used to meet the requirements for U.S. EPA certification for systems providing remanufacture to a cleaner standard.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any information he/she determines is not reliable or credible.

3. *Method C3 – Demonstrate to the E.O.’s written satisfaction that the in-use engine already meets the Tier 2 or Tier 3 marine or Tier 2 or Tier 3 off-road emission standards for auxiliary or propulsion engines in effect or would be in effect for new engines at the time of the applicable compliance date.*
 - a. A person may comply under this method by demonstrating to the E.O.’s written satisfaction that:
 - i. the in-use engine already meets the Tier 2 or Tier 3 marine standards or Tier 2 or Tier 3 off-road emission standards for auxiliary or propulsion engines,
 - ii. which apply to new engines of the same power rating and displacement as the in-use engine,
 - iii. at the time of the applicable compliance date for the in-use engine.
 - b. To comply with this method, the person may demonstrate that the in-use engine meets the Tier 3 marine or off-road engine emission standards, even if Tier 4 marine or off-road engine emission standards come into effect by the applicable compliance date. The person may rebuild the in-use engine to a cleaner standard or implement a diesel emission control strategy to aid in meeting these standards.
 - c. For purposes of the demonstration, the person may, upon E.O. approval, rely on any source of reliable and credible information, including but not limited to, any of the following:
 - i. the results from using the test method specified in section (j) or an alternative method approved by the E.O.;
 - ii. the in-use engine manufacturer’s certification test data or other emissions test data for that in-use engine;
 - iii. emissions test data derived from another in-use engine that is configured and used in a substantially similar way to the in-use engine;

- iv. emissions test data used to meet the regulatory requirements of ARB's Verification Procedure for the non-verified emission control strategy implemented; or
- v. emissions test data used to meet the requirements for U.S. EPA certification for systems providing remanufacture to a cleaner standard.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any information he/she determines is not reliable or credible.

4. *Method C4 – Demonstrate to the E.O.'s written satisfaction that the in-use engine has not and will not operate 300 or more hours per calendar year in any of the regulated in-use vessel categories or 80 or more hours per calendar year in the barge or dredge vessel categories.*

A person may comply under this method by demonstrating to the E.O.'s written satisfaction that the engine is a low use engine. This compliance method requires the person to provide records to the E.O. of the engine's total annual hours of operation while operating in any of the regulated in-use vessel categories for the calendar year immediately preceding the demonstration. The person must also provide documentation sufficient for the E.O. to project future annual hours of operation for the engine. The person will be deemed in compliance with this method only if such records and documentation demonstrate to the E.O.'s written satisfaction that the in-use engine has not and will not operate 300 or more hours per calendar year in any of the regulated in-use vessel categories with the exception of the dredge or barge categories, or 80 or more hours per calendar year in either the dredge or barge categories.

(D) *Compliance Dates.*

Table 7.1, Table 8.1, Table 9.1, and Table 10.1 below set forth the compliance dates by which a person must meet the requirements of subsection (e)(6)(A). Table 7.1 applies only to engines on ferries, excursion vessels, tugboats, towboats, and push boats with a homeport outside of the SCAQMD; Table 8.1 applies only to engines on ferries, excursion vessels, tugboats, towboats, and push boats with a homeport within the SCAQMD; Table 9.1 applies only to engines on crew and supply vessels, and Table 10.1 applies to engines on barge and dredge vessels. The compliance dates are set forth by engine model year and total annual

hours of operation (for use in any regulated in-use vessel category) of the vessel in Regulated California Waters. For Table 7.1, Table 9.1, and Table 10.1, Method D1, D2, or D3 below may be used for determining the actual or effective engine model year. For Table 8.1, only Method D1 or D3 may be used for determining the actual or effective engine model year.

1. *Method D1 – the engine’s actual model year of manufacture.*

A person may determine an engine’s compliance date under this method by using the engine’s actual model year of manufacture, as documented by the sales contract, invoice, purchase order, or other legitimate proof of purchase for the engine. The actual model year of manufacture may also be shown on a label permanently affixed to the engine by the manufacturer. In the event of a conflict between the proof of purchase and the permanent label, the date of manufacture shown on the permanent label controls.

2. *Method D2 – the engine’s effective model year based on the “Engine’s Model Year + 5” method.*

A person may determine an engine’s compliance date under this method by calculating the engine’s effective model year as the actual model year, using Method D1 above, and adding to that number 5 more years. To use this method, the person must use a diesel emissions control strategy (DECS) with the engine, as set forth below:

- a. Relative to the emissions without the use of the DECS, the engine with the DECS must be demonstrated to the E.O.’s written satisfaction as emitting at least 25 percent less diesel PM or NO_x, and neither of those pollutants are increased by more than 10 percent. This requirement is met automatically if the DECS is a verified DECS (VDECS);
- b. If the DECS is not a VDECS, the person must demonstrate compliance with this paragraph by submitting to the E.O. emissions data that demonstrate the non-verified emission control technology achieves a diesel PM or NO_x emission reduction of 25 percent or better, using the test methods specified in subsection (j). Upon approval of the E.O., the person may submit data derived from the use of other test methods to demonstrate to the E.O.’s written satisfaction the required 25 percent minimum emission reductions, such as:

- i. marine engine certification test data for the harbor craft propulsion or auxiliary engine, or engine manufacturer emissions test data;
- ii. emissions test data derived from another engine that is configured and used in a substantially similar way to the in-use engine on which the emission control strategy is to be used; or
- iii. emissions test data used to meet the regulatory requirements of the CARB Verification Procedure for the non-verified emission control strategy implemented.

The E.O. may, in his/her sole discretion and based on good engineering judgment, exclude any data derived from the test methods under paragraph b above that he/she determines are not reliable or credible.

A person's use of a DECS or VDECS, which meets the requirements of this provision, extends the engine's compliance date to the compliance date for a similar engine that is five model years newer (i.e., the actual model year for the engine with the emissions control strategy + 5).

[Note: For example, the owner of a 1995 model year engine on a tugboat, which has a homeport outside of SCAQMD and operates in Regulated California Waters for 750 hours in 2013, would normally be required to meet a December 31, 2014 compliance date, as set forth in Table 7.1. However, if a DECS that meets the requirements of this provision is implemented with this engine prior to the 2014 nominal compliance date, the engine's actual compliance date would be extended to the compliance date for a 2000 model year engine (i.e., the effective model year = the 1995 model year + 5). Accordingly, in that scenario, the engine's effective model year would extend the compliance date to December 31, 2016];

3. *Method D3 – the engine's effective model year based on the "Engine's Tier 1 Rebuild Model Year" method.*

A person may determine an engine's compliance date by demonstrating, to the E.O.'s written satisfaction, that the engine is an existing pre-2004 model year engine that was rebuilt to conform with U.S. EPA Tier 1 marine standards prior to January 1, 2008. If the E.O. is

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thus satisfied, the effective model year of the Tier 1 rebuilt engine, for purposes of determining the compliance date in Table 7.1, Table 8.1, Table 9.1, or Table 10.1, is the actual year in which the Tier 1 rebuild occurred.

Table 7.1: Compliance Dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats with Homeports Outside SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1975 and earlier	≥ 1500	12/31/2009
1975 and earlier	≥300 and < 1500	12/31/2010
1976 – 1985	≥1500	12/31/2011
1976 – 1985	≥ 300 and < 1500	12/31/2012
1986 – 1995	≥ 1500	12/31/2013
1986 – 1995	≥ 300 and < 1500	12/31/2014
Ferries Only 1996 – 1999	≥ 300	12/31/2014
Vessels Other Than Ferries 1996 – 1999	≥ 1500	12/31/2015
Vessels Other Than Ferries 1996 – 1999	≥ 300 and < 1500	12/31/2016
2000	≥ 1500	12/31/2015
2000	≥ 300 and < 1500	12/31/2016
2001 – 2002	≥ 300	12/31/2017
2003	≥ 300	12/31/2018
2004	≥ 300	12/31/2019
2005	≥ 300	12/31/2020
2006	≥ 300	12/31/2021
2007	≥ 300	12/31/2022

[Note: For example, if a 1982-model year diesel engine on a tugboat operating in Regulated California Waters is used for 750 hours in 2011, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6)(C) by December 31, 2012.].

Table 8.1: Compliance Dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats with Homeports in SCAQMD

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1979 and earlier	> 300	12/31/2009
1980 – 1985	> 300	12/31/2010
1986 – 1990	> 300	12/31/2011
1991 – 1995	> 300	12/31/2012
1996 – 2000	> 300	12/31/2013
2001	> 300	12/31/2014
2002	> 300	12/31/2015
2003	> 300	12/31/2016
2004	> 300	12/31/2017
2005	> 300	12/31/2018
2006	> 300	12/31/2019
2007	> 300	12/31/2020

[Note: For example, if a 1982-model year diesel engine on a tugboat operating in Regulated California Waters is used for 300 or more hours in 2009, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6)(C) by December 31, 2010.].

Table 9.1: Compliance Dates for Engines on Crew and Supply Vessels Statewide

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1985 and earlier	> 1500	12/31/2011
1985 and earlier	> 300 and < 1500	12/31/2012
1986 – 1995	> 1500	12/31/2013
1986 – 1995	> 300 and < 1500	12/31/2014
1996 – 2000	> 1500	12/31/2015
1996 – 2000	> 300 and < 1500	12/31/2016
2001 – 2002	> 300	12/31/2017
2003	> 300	12/31/2018
2004	> 300	12/31/2019
2005	> 300	12/31/2020
2006	> 300	12/31/2021
2007	> 300	12/31/2022

**Table 10.1: Compliance Dates for pre-Tier 1 and Tier 1 Engines on
Dredge and Barge Vessels Statewide**

Engine Model Year	Total Annual Hours of Operation	Compliance Date
1975 and earlier	>80	12/31/2011
1976 – 1980	>80	12/31/2012
1981 – 1985	>80	12/31/2013
1986 – 1990	>80	12/31/2014
1991 – 1995	>80	12/31/2015
1996 – 1999	>80	12/31/2016
2000 – 2001	>80	12/31/2017
2002	>80	12/31/2018
2003	>80	12/31/2019
2004	>80	12/31/2020
2005	>80	12/31/2021
2006	>80	12/31/2022

(E) *Compliance Extensions.*

Pursuant to this subsection (e)(6)(E), a person subject to the requirements of subsection (e)(6)(C) may request in writing to the E.O. an extension to a compliance date set forth in subsection (e)(6)(D) (i.e., extension to the “nominal” compliance date). The E.O. may grant the person an extension to the nominal compliance date for any one of the reasons set forth below. A person granted such an extension is deemed to be in compliance with the requirements of subsection (e)(6)(C) during the extension period, but only upon written authorization from the E.O. made pursuant to this provision and only until the end of the extension period. During the extension, the person must meet all other requirements of this section. Immediately upon the end of the extension period, the person must meet all the applicable requirements of this section, including but not limited to, subsection (e)(6)(C).

Except as provided in paragraph (e)(6)(E)3 below, the E.O. may not combine compliance extensions granted pursuant to this provision with any other compliance date extensions, including those set forth in this provision and in subsection (e)(6)(D)2 and (D)3. And except as provided in paragraphs (e)(6)(E)2 and (e)(6)(E)3 below, under no circumstances may the E.O. grant more than one compliance extension for any individual engine, set of engines, or harbor craft.

1. *Change in Annual Hours of Operation.*

The E.O. may grant a one-time, maximum one year extension to the nominal compliance date set forth in subsection (e)(6)(D), provided the person demonstrates to the E.O.'s written satisfaction that ~~the~~ all of the following have occurred:

- a. The person reasonably determined the vessel engine's nominal compliance date based on the engine's hours of operation two years before the nominal compliance date; and
- b. In the year immediately prior to the nominal compliance date, the engine's annual hours of operation increased significantly from the prior year such that the engine's nominal compliance date would have been accelerated from one compliance date to an earlier compliance date.

[Note: For example, suppose an operator has a 1982-model year engine on a tugboat, which has a homeport outside of SCAQMD and operates for 750 hours in Regulated California Waters in 2010. If it is reasonable for the operator to assume the annual hours of operation in 2011 will be similar to 2010, the operator would project from Table 7.1 that the engine's compliance date is December 31, 2012, and would plan his operations accordingly. However, if the vessel engine's operation increased substantially to 1600 hours in 2011, the engine normally would then have its compliance date accelerated to December 31, 2011, according to Table 7.1. The one-year extension would, therefore, extend the engine's actual compliance date back to what it would have been without the change in hours of operation (i.e., back to December 31, 2012).].

2. *No Suitable Engine Replacement for Harbor Craft.*

The E.O. may grant to a person a one year extension, which can be renewed annually, only if the person demonstrates to the E.O.'s written satisfaction that there is no suitable Tier 2 or Tier 3 marine or off-road-certified replacement engine available anywhere that can be used in the person's specific vessel, and the person cannot otherwise meet the requirements of subsection (e)(6)(C).

The E.O., in his/her sole discretion, may use any information available to the E.O. to rebut the person's demonstration. For purposes of this

paragraph, the E.O. may deem an engine as suitable to replace an existing engine if the replacement engine is similar in horsepower to the existing engine, the replacement engine can fit within the vessel's engine compartment, and installation of the replacement engine would not cause the vessel to violate U.S. Coast Guard or other applicable safety regulations. The E.O. may not consider the cost of the replacement engine, by itself or including installation and downtime costs, in determining its suitability as a replacement.

The application for and issuance of an initial extension and subsequent extensions pursuant to this paragraph are subject to the following requirements:

- a. For an initial extension and all subsequent annual extensions to be granted pursuant to this paragraph, the E.O. shall follow the same procedures for applying, determining completeness, allowing public review and considering public comments, taking final action, and publishing E.O. decisions that are set forth in subsection (f) for Alternative Control of Emissions Compliance Pathways (ACEP) applications;
- b. The E.O. shall consider all information submitted by the public, including but not limited to, information related to the availability of replacement engines suitable for the person's vessel;
- c. Except for the engine(s) for which the extension is sought, the person must demonstrate that all other engines subject to the person's direct control meet the requirements of subsection (e)(6);
- d. The person must submit the application for an extension so that it is received by the E.O. no later than 6 months before the nominal compliance date of the engine for which the extension is requested;
- e. The person must identify in the application each engine for which the extension is requested;
- f. For each engine identified in paragraph 2 above, the person must provide in the application a detailed description of the reasons and factors that serve as the basis for the claim that no suitable replacement engine is available. This description must include, at a minimum, detailed engineering diagrams, calculations, and citations to applicable U.S. Coast Guard regulations that support the

person's claim that there are no suitable replacement engines available.

- g. After the initial extension, the E.O. may grant additional one year extensions, provided the following requirements are met:
 - i. All procedures specified in paragraph (e)(6)(E)2.a and (e)(6)(E)2.b above are followed;
 - ii. The application for an additional extension demonstrates the engines identified in paragraph (e)(6)(E)2.c remain in compliance with this section;
 - iii. The application is received by the E.O. no sooner than 6 months but no later than 2 months before the expiration of the previous extension;
 - iv. The application identifies the engine(s) for which the additional extension is requested;
 - v. For each engine identified in paragraph (e)(6)(E)2.g.iv above, the person must provide in the application a detailed description of the reasons and factors that serve as the basis for the claim that suitable replacement engines remain unavailable. This description must include, at a minimum, detailed engineering diagrams, calculations, and citations to applicable U.S. Coast Guard regulations that support the person's claim that there are still no suitable replacement engines available.

3. *Equipment Manufacturer Delays or Installation Difficulties.*

Upon written request, the E.O. may grant to a person a 6-month extension to the nominal compliance date set forth in subsection (e)(6)(D), provided all the following criteria are met:

- a. the person ordered the new replacement engine or other equipment necessary to comply with the requirements of subsection (e)(6)(C) prior to the nominal compliance date set forth in subsection (e)(6)(D);
- b. the purchase order identified in paragraph a above was placed with the manufacturer no later than 6 months before the engine's nominal compliance date;
- c. the new engine or equipment has not been received or installed since it was ordered due to manufacturing delays or excessive

difficulties encountered by the engine or equipment installer;
and

- d. the applicant for the extension provides documentation to the E.O.'s satisfaction that demonstrates the criteria in subparts a. through c. above have been met. The E.O. may, in his/her sole discretion, use any information available to rebut any of the documentation submitted pursuant to subparts a through c above.

4. *Multiple Engines on Multiple Vessels Within Same Fleet and With Same Compliance Dates.*

This provision applies only to fleets of 2 or more vessels that are owned by the same person. Upon written request, the E.O. may grant to the person an extension to the nominal compliance date(s) for engines on vessels within such fleets, as set forth below;

- a. For each set of engines on two or more vessels or for each single engine in three or more vessels with compliance dates of 2009 or 2010 for ferries, excursion vessels, tugboats, towboats, and push boats and 2011 or 2012 for crew and supply vessels and barge and dredge vessels (a "set" means 2 or more engines), the E.O. may grant a one-time extension of the compliance date to December 31, 2013 for ferries, excursion vessels, tugboats, towboats, and push boats and to December 31, 2015 for crew and supply boats and barge and dredge vessels, provided the E.O. receives and approves a compliance schedule from the person that meets the requirements set forth below:
 - i. The compliance schedule is received by the E.O. no later than December 31, 2009 for ferries, excursion vessels, tugboats, towboats, and push boats and prior to December 31, 2011 for crew and supply, barge, and dredge vessels;
 - ii. For each year, up to and including 2013 for ferries, excursion vessels, tugboats, towboats, and push boats and 2015 for crew and supply vessels and barge and dredge vessels, that the extension will be in effect, the compliance schedule must identify, at a minimum, the engines on specified vessels in the fleet that will meet the requirements of subsection (e)(6)(C) within any given year;

- iii. The compliance schedule must show that all engines with compliance dates of 2009 or 2010 for ferries, excursion vessels, tugboats, towboats, and push boats and 2011 or 2012 for crew and supply vessels and barge and dredge vessels on the specified vessels in the fleet will be in compliance with subsection (e)(6)(C) by December 31, 2013 for ferries, excursion vessels, tugboats, towboats, and push boats and December 31, 2015 for crew and supply vessels and barge and dredge vessels. [Note: For example, an approvable plan may show that 25% of these engines on the specified vessels in a fleet will be in compliance in 2010, 50% in 2011, 75% in 2012, and 100% by December 31, 2013.]; and
 - iv. The compliance schedule must include all other information the E.O. deems necessary and appropriate for implementing this provision.
- b. For each set of engines on two or more vessels or each single engine on three or more vessels with a compliance date of 2011 or later for ferries, excursion vessels, tugboats, towboats, and push boats and 2013 or later for crew and supply vessels and barge and dredge vessels (a "set" means 2 or more engines), the E.O. may grant to a person a one-time, maximum one-year extension of the nominal compliance date. To receive an extension under this provision, the person must submit a written request to the E.O. that meets the following requirements:
- i. The request must be received by the E.O. no later than December 31st of the year immediately preceding the nominal compliance date for the set of engines; and
 - ii. The request identifies the engines in each set of engines and the vessels in the person's fleet that are subject to the requested extension.

For all engines within a person's fleet that have not been granted an extension pursuant to paragraphs a or b above, the compliance dates for such engines remain as set forth in subsection (e)(6)(D).

- (F) *Special Provisions Applicable to the Use of a Diesel Emission Control Strategy (DECS), including Verified Diesel Emission Control Strategies (VDECS).*

The following requirements apply to any person's use of a DECS pursuant to subsections (e)(5) or (e)(6) and are in addition to any other applicable requirements:

1. Once the DECS is installed or otherwise employed on a person's vessel, the person must continue to operate and maintain the DECS, in accordance with the manufacturer's directions, to achieve the original level of emission reductions that the DECS was designed and intended to achieve;
2. In the event a DECS fails, breaks down, or is otherwise damaged (collectively referred to hereinafter as "fail" or "failure"), the vessel owner or operator must, within 90 days of the DECS failure, do at least one of the following:
 - a. repair the DECS to good working order;
 - b. replace the failed DECS with another working DECS, if it cannot be repaired; or
 - c. employ another method that meets the requirements of subsection (e)(6)(C) and other applicable provisions of this section, if the DECS cannot be repaired.
3. The determination in subpart 2.b and 2.c above of whether a DECS cannot be repaired may only be made by either the DECS manufacturer or an authorized dealer.
4. For each replacement DECS installed under subpart 2.b above, the person must provide to the E.O. the same documentation for the replacement DECS that was required for the DECS that failed, and the person must obtain the same E.O. approvals that were required with the failed DECS.

(1.1) All Harbor Craft – Requirements for Fuel Use (Applicable On and After January 1, 2023)

- (A) Beginning January 1, 2023, a person subject to this section may only fuel a diesel engine on a harbor craft with Renewable Diesel (R100) fuel.

(B) If a harbor craft subject to this section is traveling from a port located outside of California, and that port does not have R100, that vessel's diesel engines can be fueled with either: U.S. EPA on-road diesel fuel meeting the specifications contained in 40 CFR §§ 80.500 et seq., as they existed on April 27, 2010, or U.S. EPA nonroad diesel fuel meeting the specifications contained in 40 CFR 80.29 as it existed on April 27, 2010, and 69 FR 38958 (June 29, 2004). The vessel owner or operator must retain records documenting the fuel purchase, the location and the name of the non-California port, and its lack of availability of R100 fuel on-board the vessel for a minimum of one year after the purchase of the fuel, and must make such records available upon the request of the E.O.

(3.1) All Harbor Craft (Excluding Commercial Fishing Vessels) – Requirements for New and Newly Acquired Diesel Engines (Applicable On and After January 1, 2023).

Beginning January 1, 2023, any person subject to this subsection shall not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new or in-use engine for a new or in-use harbor craft, which is intended to operate or actually operates in any of the Regulated California Waters, unless that engine on the date of acquisition:

(A) is certified to meet the most stringent of either the Tier 3 or the Tier 4 marine standards or Tier 4 Final off-road standards in effect on that date for a new engine with applicable horsepower rating and duty cycle rating or is certified to meet performance standards in Tables 7, 8, or 9 in subsection (4.1) by applicable compliance dates in effect on that date for a new engine of applicable horsepower rating and duty cycle rating.

1. A newly acquired marine engine rated below 600 kW is not required to meet the Tier 4 marine standards if there are no engines available on the date of acquisition that are certified to the Tier 4 marine emission standards for an engine of the same engine category and rated horsepower.

2. Engines certified to meet the Tier 4 Final off-road standards in effect on the date of acquisition for a new engine of applicable horsepower rating and duty cycle rating may only be acquired for use as an auxiliary or propulsion engine on harbor craft if the engine or vessel manufacturer has complied with 40 CFR § 1042.605 (Marinized land-based engines already certified to other standards for nonroad or

heavy-duty highway engines for marine use), as it existed on April 27, 2010; or

- (B) is newly acquired within the allowable 6 month "sell-through" period, as set forth in this paragraph. For purposes of this paragraph only, the allowable sell-through period runs through 6 months after the date of the Tier 3, or Tier 4 marine standards, or Tier 4 Final off-road standards have come into effect for a new engine of applicable horsepower rating and duty cycle rating as the engine being replaced. Engines that are subsequently sold, supplied, offered for sale, or otherwise newly acquired after the 6 month sell-through period are subject to the requirements specified in paragraph (A) of this subsection; or
- (C) is replacing an engine that is non-functioning due to equipment failure, and the E.O. has determined, pursuant to the provisions of 40 CFR § 1042.615 engine replacement exemption, as it existed on April 27, 2010, that no engine certified to the current standards is produced by any manufacturer with the appropriate physical or performance characteristics to repower the vessel. In such event, an alternate engine may be acquired for the replacement. Pursuant to 40 CFR § 1042.615, a separate determination, addressing each tier of emission standards that is more stringent than the emission standards for the engine being replaced must be made. For example, if the engine being replaced was built before the Tier 3 standards applied, and engines of that size are currently subject to Tier 4 standards, a person must consider whether any Tier 3 or Tier 4 engines have the appropriate physical and performance characteristics for replacing the old engine. If a Tier 4 engine is determined not to have the appropriate physical and performance characteristics, but a Tier 3 engine does have the appropriate physical and performance characteristics, it must be selected as the replacement engine. In no case can the replacement engine be certified to a less stringent standard than the engine it is replacing. Documentation (e.g. an engineering evaluation) of these determinations must be supplied to the E.O. and the E.O.'s determination must be obtained before an engine replacement is made pursuant to this provision; or
- (D) is replacing an engine certified to a less stringent emission standard but equivalent or more stringent standards than the replaced engine for which the E.O. has previously approved a low use as outlined in subsection (e)(7).

(4.1) All Harbor Craft (Excluding Commercial Fishing Vessels) – Requirements for New and Newly Acquired In-Use Harbor Craft (Applicable On and After January 1, 2023).

(A) Requirements for new harbor craft.

1. Beginning January 1, 2023, any person subject to this subsection shall not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire a new harbor craft for use in any of the Regulated California Waters unless the tailpipe emissions from each propulsion and auxiliary engine on the vessel meets the applicable performance standards in Table 7, Table 8 or Table 9 set forth in this subsection. Propulsion or auxiliary engines meeting the applicable performance standards in Table 7, Table 8, or Table 9, using Tier 4 Final off-road engines in effect on the date of vessel acquisition may be sold, purchased, offered for sale, leased, rented, imported, or otherwise acquired for use if the engine or vessel manufacturer has complied with 40 CFR 1042.605 (Marinized land-based engines already certified to other standards for nonroad or heavy-duty highway engines for marine use), as it existed on April 27, 2010.
2. New vessels with engines rated less than 600 kW shall meet the tailpipe emission performance standards in Table 7 if Tier 4 marine engines are certified for the applicable horsepower rating and duty cycle rating on the date the keel is laid.
3. Methane (CH₄) emissions from engines must not exceed 2.0 g/bhp-hr when using a fuel other than diesel.
4. New excursion vessels and short run ferries must meet performance standards if acquired on or after January 1, 2023 but prior to compliance dates set forth in Table 10 in subsection (e)(5.1).
5. In the event Tier 3 or Tier 4 engines are available, but no engines or aftertreatment are available to meet Tier 3 + DPF or Tier 4 + DPF performance standards as shown in Tables 7 through 9, a person subject to this subsection must, prior to commencing construction on the new vessel, submit a request to the E.O. detailing the reasons why performance standards cannot be met. The E.O. may approve use of a certified Tier 3 or Tier 4 engine not meeting the performance standards shown in Tables 7 through 9. Any engines on new vessels approved by the E.O. for not meeting this standard shall be subject to requirements

of subsection (e)(6.1) after the vessel commences operating in
Regulated California Waters.

Table 7: Performance Standards* for Propulsion and Auxiliary Marine Engines – Tier 4 + DPF

Category	Displacement (L/cylinder)	Maximum Engine Power (kW)	Tier 4 Engine Model Year	NOx (g/bhp-hr)	PM (g/bhp-hr)
C1 Commercial	All	kW < 1,400	2017+	1.3	0.005
	All	1,400 ≤ kW < 2,000	2016+	1.3	0.005
	All	2,000 ≤ kW < 3,700	2014+	1.3	0.005
	< 7.0	≥ 3,700	2014-2015	1.3	0.010
2016+			1.3	0.010	
C2 Commercial	All	600 ≤ kW < 1,400	2017+	1.3	0.005
	All	1400 ≤ kW < 2,000	2016+	1.3	0.005
	All	2,000 ≤ kW < 3,700	2014+	1.3	0.005
	< 15.0	≥ 3,700	2014-2015	1.3	0.010
	15.0 ≤ disp < 30.0		2014-2015	1.3	0.030
	All		2016+	1.3	0.010

Note*: Performance standards are emissions measured when tested on CARB diesel, not R100.

Table 8: Performance Standards* for Propulsion and Auxiliary Marine Engines – Tier 3 + DPF

Category	Displacement (L/cylinder)	Maximum Engine Power (kW)	Tier 3 Engine Model Year	HC+NOx (g/bhp-hr)	PM (g/bhp-hr)
C1 Commercial < 75 kW	< 0.9	< 8	2009+	5.6	0.045
		8 ≤ kW < 19	2009+	5.6	0.045
		19 ≤ kW < 37	2009-2013	5.6	0.034
			2014+	3.5	0.022
		37 ≤ kW < 75	2009-2013	5.6	0.034

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			<u>2014+</u>	<u>3.5</u>	
<u>C1</u> Commercial Engines with ≤ 35 kW/L power density	< 0.9		<u>2012+</u>	<u>4.0</u>	<u>0.016</u>
	$0.9 \leq \text{disp}$ < 1.2	All	<u>2013+</u>	<u>4.0</u>	<u>0.013</u>
	$1.2 \leq \text{disp}$ < 2.5	< 600	<u>2014-</u> <u>2017</u>	<u>4.2</u>	<u>0.010</u>
			<u>2018+</u>		<u>0.010</u>
	$2.5 \leq \text{disp}$ < 3.5	< 600	<u>2013-</u> <u>2017</u>	<u>4.2</u>	<u>0.010</u>
			<u>2018+</u>		<u>0.010</u>
	$3.5 \leq \text{disp}$ < 7.0	< 600	<u>2012-</u> <u>2017</u>	<u>4.3</u>	<u>0.010</u>
					<u>0.010</u>
<u>2018+</u>			<u>0.010</u>		
<u>C1</u> Commercial Engines with > 35 kW/L power density	< 0.9	≥ 75	<u>2012+</u>	<u>4.3</u>	<u>0.017</u>
	$0.9 \leq \text{disp}$ < 1.2	All	<u>2013+</u>	<u>4.3</u>	<u>0.010</u>
	$1.2 \leq \text{disp}$ < 2.5		<u>2014+</u>	<u>4.3</u>	<u>0.010</u>
	$2.5 \leq \text{disp}$ < 3.5		<u>2013+</u>	<u>4.3</u>	<u>0.010</u>
	$3.5 \leq \text{disp}$ < 7.0		<u>2012+</u>	<u>4.3</u>	<u>0.010</u>
<u>C2</u>	$7.0 \leq \text{disp}$ < 15.0		< 600	<u>2013+</u>	<u>4.6</u>
	$15.0 \leq \text{disp}$ < 20.0	< 600	<u>2014+</u>	<u>5.2</u>	<u>0.038</u>
	$20.0 \leq \text{disp}$ < 25.0	< 600		<u>7.3</u>	<u>0.030</u>
	$25.0 \leq \text{disp}$ < 30.0	< 600		<u>8.2</u>	<u>0.030</u>
<u>C3</u>	> 30.0	All	<u>2016+</u>	<u>2.5 (rpm < 130)</u>	<u>0.010</u>
				<u>$6.7 \times N^{-0.20i}$ (130 \leq rpm < 2,000)</u>	
				<u>1.5 (rpm \geq 2,000)</u>	

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Note*: Performance standards are emissions measured when tested on CARB diesel, not R100.

Table 9: Performance Standards* for Propulsion and Auxiliary Off-Road Engines – Tier 4 Final + DPF

<u>Rated Power (kW)</u>	<u>Tier 4 Engine Model Year</u>	<u>NMHC (g/bhp-hr)</u>	<u>NMHC + NOx (g/bhp-hr)</u>	<u>NOx (g/bhp-hr)</u>	<u>PM (g/bhp-hr)</u>
<u>kW < 8</u>	<u>2008+</u>	<u>-</u>	<u>5.6</u>	<u>-</u>	<u>0.045</u>
<u>8 ≤ kW < 19</u>	<u>2008+</u>	<u>-</u>	<u>5.6</u>	<u>-</u>	<u>0.045</u>
<u>19 ≤ kW < 37</u>	<u>2013+</u>	<u>-</u>	<u>3.5</u>	<u>-</u>	<u>0.005</u>
<u>37 ≤ kW < 56</u>	<u>2013+</u>	<u>-</u>	<u>3.5</u>	<u>-</u>	<u>0.005</u>
<u>56 ≤ kW < 75</u>	<u>2014+</u>	<u>0.14</u>	<u>-</u>	<u>0.30</u>	<u>0.005</u>
<u>75 ≤ kW < 130</u>	<u>2014+</u>	<u>0.14</u>	<u>-</u>	<u>0.30</u>	<u>0.005</u>
<u>130 ≤ kW < 225</u>	<u>2014+</u>	<u>0.14</u>	<u>-</u>	<u>0.30</u>	<u>0.005</u>
<u>225 ≤ kW < 450</u>	<u>2014+</u>	<u>0.14</u>	<u>-</u>	<u>0.30</u>	<u>0.005</u>
<u>450 ≤ kW < 560</u>	<u>2014+</u>	<u>0.14</u>	<u>-</u>	<u>0.30</u>	<u>0.005</u>
<u>560 ≤ kW < 900</u>	<u>2015+</u>	<u>0.14</u>	<u>-</u>	<u>2.61 / 0.50^a</u>	<u>0.005</u>
<u>kW > 900</u>	<u>2015+</u>	<u>0.14</u>	<u>-</u>	<u>2.61 / 0.50^a</u>	<u>0.005</u>

Note*: Performance standards are emissions measured when tested on CARB diesel, not R100.

(a) The NOx standard for generator sets is 0.50 g/bhp-hr.

(B) Requirements for newly acquired in-use vessels.

1. Any person subject to this subsection shall not sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an in-use harbor craft for use in any of the Regulated California Waters unless each propulsion and auxiliary engine on the vessel complies with all requirements of this section.
2. In situations where in-use vessels are approved for low use exception or the vessels are in compliance using compliance extensions, the approval of low use exception and compliance extensions are not transferable to new owners.
3. Newly acquired in-use vessels are not eligible for low use exceptions set forth in subsection (e)(7) or compliance extensions except for (e)(6.1)(E)(2) and (e)(6.1)(E)(4).

4. Relocated vessels within a person’s direct control transferred from outside California into RCW are not newly acquired vessels, and subject to requirements in subsection (e)(6.1). If a vessel is claimed as a relocated vessel, vessel owners/operators must submit paperwork of vessel acquisition with acquisition transaction date as set forth in subsection (m)(14) and subsection (n.1). For the purpose of this paragraph, any newly reported vessel will be assumed newly acquired unless records show otherwise.

(5.1) Requirements for Zero-Emission and Advanced Technologies (ZEAT) for New and In-Use Short Run Ferries, and New and Newly Acquired Excursion Vessels (Applicable On and After January 1, 2023).

(A) Any person who sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires the following that operates or is intended to operate in Regulated California Waters must comply with the applicable ZEAT requirements shown in Table 10: new excursion vessels; newly acquired excursion vessels; new short run ferries; newly acquired short run ferries; or in-use short run ferries operated above the annual hour limits for low use exceptions as set forth in subsection (e)(7).

Table 10: Compliance Dates for Zero-Emission and Advanced Technologies

<u>Marine Technology Type</u>	<u>Vessel Category Requirement</u>	<u>ZEAT Required Starting On</u>
<u>Zero-Emission Capable Hybrid</u>	<u>New and Newly Acquired Excursion Vessels</u>	<u>January 1, 2025</u>
<u>Zero-Emission</u>	<u>New and In-Use Short Run Ferries</u>	<u>January 1, 2026</u>

(B) On or after the dates shown in Table 10, all internal combustion engines, regardless of fuel type, must meet the following requirements:

1. Engines on all (in-use and new) short run ferries must meet the provisions set forth in subsection (e)(3.1);
2. Combustion engines on short run ferries are not permitted to operate more than 20 hours/year unless performing emergency operations,

documented according to recordkeeping requirements in subsection (m)(19)(C) and reported to CARB according to subsection (n.1);

3. Engines on new and newly acquired excursion vessels must meet the performance standards set forth in subsection (e)(4.1). Total on-board work derived from combustion engines must be below 70 percent annually.

(C) Before adopting ZEAT, a person must submit an application to, and receive approval from the E.O., as set forth below:

1. Application Process.

At least 18 months prior to the applicable compliance date or when ZEAT will be deployed, a ZEAT application must be submitted with a minimum of the following information:

- a. the applicant company's name, address, and contact information;
- b. information specific to the harbor craft and engine(s) on which ZEAT will be used, including the vessel name and identification number(s); engine make, model, and serial numbers; and all other information that uniquely identify the engine;
- c. certification documentation, a detailed engineering analysis or calculations, design information, battery or fuel cell capacities, typical trips or other information required to demonstrate meeting the following performance standards:
 - i. Vessels adopting zero-emission capable hybrid technology must demonstrate that 30 percent or more of combined main propulsion and auxiliary power will be derived from a zero-emission tailpipe emission source when averaged over a calendar year. Zero emission power sources include but are not limited to, battery plug-in hybrid propulsion systems capable of being charged from the electric grid, or hydrogen fuel cells.
 - ii. Short-run ferries or other full zero-emission vessels must not use an internal combustion engine to generate propulsion or auxiliary power for the normal operation of the vessel unless the engine meets the emission limits for distributed generation or is used exclusively during emergency operations. Use of internal combustion engines for emergency operation is

permitted but subject to recordkeeping requirements in subsection (m)(19)(C).

- d. information and plans for charging or fueling infrastructure that include an overall description of the frequency and duration of charging or fueling, a list of key hardware components, and applicable documentation of communication with utility companies, fueling contracts with hydrogen providers, and/or installation of on-site fueling systems.
- e. the proposed recordkeeping, reporting, monitoring, and if applicable, testing procedures, that the applicant plans to use to demonstrate continued effectiveness of the ZEAT. Recordkeeping and reporting must include, at a minimum, the requirements in subsection (m)(19).

2. E.O. Review and Final Decision-Making Process.

- a. Within 30 days after receiving a ZEAT application, the E.O. shall notify the applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification must identify the application's deficiencies. The applicant shall submit the supplemental documentation within 30 days of receiving a notification the application is incomplete. The E.O. shall have an additional 30-day period for reviewing each set of documents or information submitted in response to an incomplete determination.
- b. Within 60 days of deeming an application complete, the E.O. shall take final action to either approve or deny a ZEAT application, and the E.O. shall notify the applicant accordingly. In approving or disapproving a ZEAT application, the E.O. will base his or her determination on the information submitted in the ZEAT application and his or her exercise of good engineering judgment. If the application is denied or modified, the E.O. shall state the reasons for the denial or modification in the notification. The E.O. shall specify all terms, conditions, and requirements the E.O. determines are necessary for the applicable vessel to operate properly and reduce emissions of air pollutants consistent with this section.

(D) A person must use a CARB certified, verified, or approved ZEAT, unless no dedicated process exists at the time of deployment. Regardless if a

specific deployed ZEAT is CARB approved, certified or verified, a person must still submit information to the E.O. following the application process described in subsection (e)(5.1)(C).

(5.2) ZEAT Credit for Early or Surplus Deployments (Applicable On and After January 1, 2023).

(A) Applicability.

If a person adopts ZEAT on new or newly acquired excursion vessels or short run ferries three years prior to compliance dates shown in Table 10, or at any time, before or after January 1, 2023 for any other vessel category, a person may be granted additional compliance time as set forth in Table 11 for another excursion vessel or short run ferry subject to subsection (e)(5.1), for each in-use engine to meet performance standards in subsection (e)(6.1) on another vessel in any regulated in-use category, or for each in-use engine to meet the requirements for commercial fishing vessels in subsection (e)(6.2) that is under a person's direct control and operating within the same California air basin.

Table 11. ZEAT Credit Time for Surplus ZEAT Deployment

Marine Technology Type	Maximum Additional Compliance Time
<u>Zero-Emission Capable Hybrid</u>	<u>3 Extra Years</u>
<u>Zero-Emission</u>	<u>7 Extra Years</u>

For example, a pilot boat, which is not subject to ZEAT requirements as set forth in subsection (e)(5.1), but must meet Tier 4 + DPF performance standards as set forth in subsection (e)(6.1) by December 31, 2027, is removed from service and replaced with a zero-emission vessel December 31, 2026. A person may request up to seven additional years to be granted for another vessel in the fleet and air basin to comply with requirements of subsection (e)(6.1).

(B) Eligibility and Requirements for Receiving ZEAT Credit.

1. Vessels included as part of an Alternative Control of Emissions (ACE) as set forth in subsection (f) are not eligible to generate or receive a ZEAT credit pursuant to this subsection.

2. ZEAT vessels deployed using incentive funding are eligible to generate ZEAT credit unless restricted by guidelines for the incentive funding program.
3. ZEAT vessels deployed in Regulated California Waters prior to or after January 1, 2023 are eligible to generate ZEAT credit.
4. ZEAT credit can only be applied to vessels with engines certified to Tier 2 or more stringent emission standards.
5. Receiving a ZEAT credit for engines or vessels in a person's fleet does not preclude a person from applying for feasibility extensions set forth in subsections (e)(6.1)(E)(2-4) after the expiration of the ZEAT credit.
6. Any combination of ZEAT credit shall not extend the compliance deadline of any engine or vessel beyond December 31, 2034.
7. ZEAT credit cannot be applied to vessels with a homebase or regularly scheduled stops within two miles of a Disadvantaged Community (DAC), unless the ZEAT vessel deployed to generate the ZEAT credit also has a homebase or regularly scheduled stops within two miles of a DAC.

(C) ZEAT Credit Application Process.

1. Before applying the ZEAT credit to another vessel in their fleet, the ZEAT vessel generating the credit must be deployed and operational, and a person must receive written approval from the E.O.
2. ZEAT credit applications must demonstrate that deployed ZEAT vessels meet the performance standards and requirements set forth in subsection (e)(5.1)(C)1.a-e.
3. A person is eligible to receive the ZEAT credit time shown in Table 11 without an analysis of emissions showing that deploying the ZEAT vessel achieves equal or greater emission reductions within their fleet. Emissions analysis is required for zero-emission capable hybrid vessels

in partial fulfillment of meeting requirements of CARB approval of technologies as listed in (e)(5.1)(C)1.a-e.

4. In their ZEAT application, a person must identify the specific harbor craft and engine(s) on which maximum of three or seven years additional compliance time will be applied if ZEAT is adopted early or adopted in vessel categories where ZEAT is not required, including the vessel name and identification number(s); engine make, model, and serial numbers; and all other information that uniquely identify the engine(s).
5. Within 30 days after receiving a ZEAT credit application, the E.O. shall notify an applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification shall identify the application's deficiencies. The applicant shall submit the supplemental documentation within 30 days of receiving a notification the application is incomplete. The E.O. shall have an additional 30-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the E.O. from requesting additional information from the applicant, during any part of the ZEAT application process, which the E.O. determines is necessary to evaluate the application.
6. A person with an approved ZEAT credit must notify the E.O. in writing within 30 days upon learning of any information that would alter the analysis submitted. If the E.O. has reason to believe that an approved ZEAT credit has been granted to a person that no longer meets the criteria for a ZEAT credit, the E.O. may modify or revoke the ACE as necessary to assure that the applicant and subject vessel(s) meet the emission reduction requirements in this section.
7. A person with an approved ZEAT credit must maintain operating records in the manner and form as specified by the E.O. A person subject to an approved ZEAT credit must retain records and reports on each vessel or at a vessel owner/operator's office for the lifetime of each engine receiving the ZEAT credit.

(6.1) In-Use Engines and Vessels (Excluding Commercial Fishing Vessels) – Requirements for Meeting Performance Standards (Applicable On and After January 1, 2023).

(A) Applicability. For Any Engines on Regulated In-Use Vessels.

1. For purposes of this subsection, regulated in-use vessels include ATBs, barges (including tank barges, and barges operating as part of ATBs), commercial passenger fishing vessels, crew and supply vessels, dredges (including dredge engines having over 30 L/cylinder), excursion vessels, ferries (excluding in-use short run ferries), pilot vessels, push boats, research vessels, tugboats (including ocean-going tugboats and towboats, and tugboats operating as part of ATBs), towboats, and workboats.
2. This subsection (e)(6.1) applies on and after January 1, 2023 to any person who owns or operates a regulated in-use vessel with any marine or off-road engines operating more than the annual low use hours limits specified in Table 18 in subsection (e)(7).

(B) General Requirements.

1. On and after January 1, 2023, a person who owns or operates a regulated in-use vessel with any marine or off-road diesel engines may not own, operate, or sell within California an in-use engine, or a vessel with an in-use engine that is intended to operate or actually operates in any of the Regulated California Waters, unless the tailpipe emissions from that engine or diesel engine system meet the performance standards set forth in subsection (4.1) using at least one of the compliance methods set forth in subsection (e)(6.1)(C) by the applicable compliance date.
2. For purposes of this subsection, “applicable compliance date” is either the compliance date, as set forth in subsection (e)(6.1)(D) for the in-use engine, or the compliance date from subsection (e)(6.1)(D) for the in-use engine, as extended pursuant to subsection (e)(6.1)(E), whichever applies and occurs later.
3. In-use engines rated below 600 kW are not permitted to be repowered with engines meeting Tier 3 marine standards if an engine with the applicable horsepower and duty cycle rating is certified to the Tier 4 marine standards is available. If Tier 4 engines are not available under

600 kW, and engines are repowered on or after January 1, 2023 to the Tier 3 standards, they would not need to be repowered to Tier 4 standards according to compliance dates set forth in this subsection.

4. In-use engines rated below 600 kW that meet Tier 3 standards before January 1, 2023 are subject to meeting Tier 4 standards if an engine of the applicable horsepower rating and duty cycle is available 12 months prior to the nominal compliance deadline, unless after January 1, 2023, the Tier 3 engines are retrofit with a DPF and meet Tier 3 + DPF standards by the nominal compliance dates.
5. In-use engines rated above 600 kW are required to ultimately meet Tier 4 + DPF performance standards under this subsection. If engines meeting Tier 4 marine or Tier 4 Final off-road are not available for the horsepower rating and duty cycle of the vessel by an engine's compliance deadline, a person would be eligible for a compliance extension as set forth in subsection (e)(6.1)(E). Early and voluntary upgrades of engines rated above 600 kW to meeting Tier 3 standards would still be subject to repower with engines meeting Tier 4 standards.
6. If an in-use short-run ferry has adopted ZEAT to meet the requirements of subsection (e)(5.1), or if an in-use commercial fishing operates in regulated in-use vessel categories, operation of the vessel in other regulated in-use vessel categories is subject to the requirements of this subsection and is eligible for a low use exception as defined in subsection (e)(7) based on the tier level and operating hours of the engine.
7. In situations where engines applicable to subsection (e)(6.1) do not meet performance standards but remain installed on the vessel, a person subject to this subsection must take an action that prevents the startup or operation of that engine. Examples include, but are not limited to, electrically or mechanically locking the engine to prevent operation, or permanently disconnecting fuel lines. Non-operational engines must meet applicable recordkeeping and reporting requirements defined in subsections (m) and (n.1).
8. In situations where vessel owners/operators are in the process of selling a non-compliant vessel outside of Regulated California Waters, necessary operations, such as performing sea trials, or transporting the vessel outside of Regulated California Waters, is permitted after the

seller receives written approval from the E.O. Prior to 14 days of the planned operation, the seller must provide an estimate of operating hours on each non-compliant engine, the dates and locations of operation, and demonstrate what efforts will be taken to minimize the number of operational hours.

(C) Compliance Methods.

1. Method C1 – Replace the in-use engine with a U.S. EPA certified marine Tier 3 or Tier 4 engine or off-road Tier 4 Final engine that meets CARB performance standards in its certified condition by U.S. EPA or CARB.

A person may comply under this method by replacing the in-use engine with an engine certified to the most stringent of either the Tier 3 marine, Tier 4 marine or Tier 4 Final off-road engine emission standards applicable to a new engine with the applicable horsepower rating and duty cycle rating as the in-use engine at issue, that meets the CARB performance standards in either Table 7, Table 8, or Table 9, as applicable, as set forth in subsection 93118.5(e)(4.1) in its certified condition by U.S. EPA or CARB. The replacement engine must meet CARB defined performance standards that would apply to a new engine, of the applicable horsepower rating and duty cycle rating as the in-use engine, at the time of the applicable compliance date set forth in subsection (e)(6.1)(D) plus any compliance extensions approved pursuant to subsection (e)(6.1)(E).

2. Method C2 – Replace the in-use engine with a U.S. EPA certified marine Tier 3 or Tier 4 engine or off-road Tier 4 final engine that does not meet CARB performance standards and retrofit with a CARB Level 3 verified diesel emission control strategy (Level 3 VDECS or DPF).

If an engine does not meet CARB performance standards in Table 7, Table 8, or Table 9 as set forth in subsection 93118.5(e)(4.1), a person may comply under this method by replacing the in-use engine with an engine certified to the most stringent of either the Tier 3 marine, Tier 4 marine or Tier 4 Final off-road engine emission standards applicable to a new engine with applicable horsepower rating and duty cycle rating as the in-use engine at issue, and retrofitting the engine with a DPF. The replacement engine must meet the U.S. EPA Tier 3 or Tier 4 marine or Tier 4 Final off-road engine emission standards that would apply to a new engine, of the applicable horsepower rating and duty

cycle rating as the in-use engine, at the time of the applicable compliance date set forth in subsection (e)(6.1)(D) or (e)(6.1)(E) if compliance extensions are approved. The replacement engine must meet the provisions of subsection 93118.5(e)(3.1).

3. Method C3 – Demonstrate to the E.O.’s satisfaction that the tailpipe emissions meet the performance standards using Alternative Compliance Pathways.

A person may comply under this method by demonstrating that the tailpipe emissions otherwise meet the performance standards set forth in Table 7, Table 8, and Table 9 of subsection 93118.5(e)(4.1) using an alternative compliance pathway as outlined in subsection 93118.5(f). To comply with this method, the applicant must follow the provisions set forth in subsection 93118.5(f).

4. Method C4 – Meet CARB performance standards using a two-step phase-in method (pre-Tier 1 and Tier 1 engines only).

Any pre-Tier 1 or Tier 1 certified engines on regulated in-use vessels may meet CARB performance standards using phase-in paths described below:

- a. replace the in-use pre-Tier 1 or Tier 1 certified engine with an engine meeting the most stringent standards (Tier 3 or Tier 4 marine; or Tier 4 Final off-road) for a new engine with the applicable horsepower rating and duty cycle rating as the in-use engine by the compliance date set forth in Table 12 in subsection (e)(6.1)(D) or (e)(6.1)(E) if compliance extensions are approved. The replacement engine must meet the provisions of subsection (e)(3.1).
- b. retrofit the U.S. EPA certified Tier 3 or Tier 4 marine or Tier 4 Final off-road engine with a DPF by the applicable compliance date set forth in Table 13, Table 14 or Table 15 in subsection (e)(6.1)(D) or (e)(6.1)(E) if compliance extensions are approved. If Tier 3 or Tier 4 engines already meet CARB performance standard set forth in subsection (e)(4.1) in their certified condition by U.S. EPA, retrofitting with a DPF is not required.

In lieu of phase-in paths, regulated in-use vessels with pre-Tier 1 or Tier 1 certified engines may follow any of the above applicable compliance

methods (e)(6.1)(C)(1) through (3) to comply with the in-use performance standards set forth in subsection (e)(4.1).

(D) Compliance Dates.

Table 12, Table 13, Table 14, and Table 15 below set forth the compliance dates by which a person must meet the requirements of subsection (e)(6.1)(B). Table 12 applies only to any pre-Tier 1 and Tier 1 certified engines on regulated in-use vessels, which generally include but are not limited to workboats, research vessels, pilot vessels, tank barges, and commercial passenger fishing vessels that were not subject to the in-use engine compliance requirements prior to January 1, 2023; Table 13 applies only to Tier 2, Tier 3, or Tier 4 engines on ferries (except for short run ferries), pilot vessels, all tugboats, towboats, and push boats; Table 14 applies only to Tier 2, Tier 3, or Tier 4 engines on research vessels, commercial passenger fishing vessels, and in-use excursion vessels, and Table 15 applies to Tier 2, Tier 3, or Tier 4 engines on barge and dredge vessels, crew and supply vessels, and workboats. The compliance dates are set forth by engine model year. For Table 12, Table 13, Table 14, and Table 15, Method D1, or D2 below may be used for determining the actual or effective engine model year.

1. Method D1 – the engine’s actual model year.

A person may determine an engine’s compliance date under this method by using the engine’s actual model year of manufacture, as documented by the sales contract, invoice, purchase order, or other legitimate proof of purchase for the engine. The actual model year of manufacture may also be shown on a label permanently affixed to the engine by the manufacturer. In the event of a conflict between the proof of purchase and the permanent label, the earlier of the two dates shall be used for the purpose of this paragraph.

Using Method D1, with the exception of engines complying by subsection (e)(6.1)(C)(4)b., the compliance date for an engine is based on the model year for the in-use engine that was installed on the in-use vessel as of December 31, 2022.

2. Method D2 – the engine’s effective model year based on the “Engine’s Tier 2 or Tier 3 Rebuild Model Year” method.

- a. A person may determine an engine’s compliance date by demonstrating, to the E.O.’s written satisfaction, that the engine is an existing pre-2009 model year engine that was rebuilt to conform with U.S. EPA Tier 2 marine standards prior to January 1, 2014. If the E.O. is thus satisfied, the effective model year of the Tier 2 rebuilt engine, for purposes of determining the compliance date in Table 12, Table 13, Table 14, or Table 15, is the actual year in which the Tier 2 rebuild occurred.

- b. A person may determine an engine’s compliance date by demonstrating, to the E.O.’s written satisfaction, that the engine was rebuilt to U.S. EPA Tier 3 marine standards. If the E.O. is thus satisfied, the effective model year of the Tier 3 rebuilt engine, for purposes of determining the compliance date in Table 12, Table 13, Table 14, or Table 15, is the actual year in which the Tier 3 rebuild occurred.

Table 12: Compliance Dates for Any Pre-Tier 1 and Tier 1 Certified Engines on All Regulated In-Use Vessels

<u>Engine Model Year</u>	<u>Compliance Date</u>
<u>1993 and earlier</u>	<u>12/31/2023</u>
<u>1994 – 2001</u>	<u>12/31/2024</u>
<u>2002 – 2007</u>	<u>12/31/2025</u>

[Note: For example, if a 1993 model year diesel engine on a research vessel operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6.1)(C) by December 31, 2023.]

Table 13: Compliance Dates for Tier 2, Tier 3, or Tier 4 Engines on Ferries (Except Short Run Ferries), Pilot Vessels, All Tug/Towboats, and Push Boats

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<u>Engine Model Year and Vessel Category</u>	<u>Compliance Date</u>
<u>2009 and earlier (Except Pilot Vessels)</u>	<u>12/31/2024</u>
<u>2012 and Earlier Pilot Vessels</u>	<u>12/31/2025</u>
<u>2010 – 2012 All Other Vessels*</u>	<u>12/31/2025</u>
<u>2013 – 2015**</u>	<u>12/31/2026</u>
<u>2016 – 2019**</u>	<u>12/31/2027</u>
<u>2020 – 2021**</u>	<u>12/31/2028</u>
<u>2022 and later**</u>	<u>12/31/2029</u>

*Ferries (Except Short Run Ferries), All Tug/Towboats, and Push Boats. **All vessels listed in the title of this table, including ferries (except short-run), pilot, all tug/towboats, and push boats. [Note: For example, if a 2020 model year diesel engine on a tugboat operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6.1)(C) by December 31, 2028.]

Table 14: Compliance Dates for Tier 2, Tier 3, or Tier 4 Engines on Research Vessels, Commercial Passenger Fishing Vessels, and In-Use Excursion Vessels

<u>Engine Model Year</u>	<u>Compliance Date</u>
<u>2010 and earlier</u>	<u>12/31/2026</u>
<u>2011 – 2012</u>	<u>12/31/2027</u>
<u>2013 – 2014</u>	<u>12/31/2028</u>
<u>2015 – 2017</u>	<u>12/31/2029</u>
<u>2018 and later</u>	<u>12/31/2030</u>

[Note: For example, if a 2015 model year diesel engine on a research vessel operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6.1)(C) by December 31, 2029.]

Table 15: Compliance Dates for Tier 2, Tier 3, or Tier 4 Engines on Barges, Dredges, Crew and Supply Vessels, and Workboats

<u>Engine Model Year</u>	<u>Compliance Date</u>
<u>2009 and earlier</u>	<u>12/31/2028</u>
<u>2010 – 2013</u>	<u>12/31/2029</u>
<u>2014 – 2017</u>	<u>12/31/2030</u>
<u>2018 and later</u>	<u>12/31/2031</u>

[Note: For example, if a 2010 model year diesel engine on a workboat operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6.1)(C) by December 31, 2029.]

(E) Compliance Extensions.

[Note: The plain English narrative in this overview is intended as a convenient guide for the reader and in no way adds, deletes, modifies, or otherwise affects the legal requirements and substantive provisions specified in subsection (E) or any other part of this section. Subsection (E) sets forth the various compliance extensions that can be consolidated into three groups with multiple potential pathways:

- Infrastructure extensions include E1
- Feasibility extensions include E2, E3 and E4
- Scheduling extensions include E5, E6 and E7

Extensions may be combined among these three groups, for a maximum total of 6 years and extensions may not extend past December 31, 2034, with the exception of feasibility extensions that do not have limits on the number of renewals.

Infrastructure extensions can be granted for unforeseen, temporary, or extenuating circumstances that prevent the use of shore power or ZEAT infrastructure. This extension lasts one year and is renewable once for a total of two years, and may be combined with any other group of compliance extension.

Feasibility extensions are granted for feasibility issues and applies in situations if Tier 4 engines or DPFs are not available (E2), if engines or DPFs will not fit and an operator cannot afford a replacement vessel (E3), or if a vessel with Tier 4 engines have no fitment for a DPF, and operate below 2,600 hours per year, or 1,300 hours per year if the vessel has a homebase or has regularly scheduled stops within 2 miles of a DAC (E4).

- An engineering analysis of fitment shall consider all possible modifications or vessel reconfigurations.
- Extending a vessel's length, or modifications to the vessel resulting in a passenger capacity to be lowered by more than 50 percent are considered not feasible.
- Each feasibility extension is eligible for a 2-year renewable extension. Except for workboats, extensions granted using pathway E3 cannot be approved if 6 years of extensions have already been approved using pathways E2 and E4.
- Pathways E2 and E4 are not subject to the 6 year or December 31, 2034 time limits.

Scheduling extensions are granted in the event that unforeseen equipment manufacturer (E5) or installation delays occur, if multiple engines have the same

compliance date (E6) (for example two engines on two vessels, or 1 engine on three vessels), or if multiple engines on the same vessel have different compliance dates (E7).

- Any of these circumstances would provide a one-year, non-renewable extension.
- Each engine is only able to receive 1 year of total extensions from any of the three pathways in scheduling extensions group.]

Pursuant to this subsection (e)(6.1)(E), a person subject to the requirements of subsection (e)(6.1)(C) may request that the E.O. grant an extension to a compliance date set forth in subsection (e)(6.1)(D) (i.e., extension to the “nominal” compliance date). The E.O. may grant the applicant an extension to the nominal compliance date for any one of the reasons set forth below. An applicant granted such an extension is deemed to be in compliance with the requirements of subsection (e)(6.1)(C) during the extension period, but only upon written authorization from the E.O. made pursuant to this provision and only until the end of the extension period. During the extension, the applicant must meet all other requirements of this section. Immediately upon the end of the extension period, the applicant must meet all the applicable requirements of this section, including but not limited to, subsection (e)(6.1)(C).

Subsection (E) sets forth three groups of compliance extensions, including infrastructure extension (E1), feasibility extensions (E2, E3 and E4) and scheduling extensions (E5, E6 and E7). Extensions may be allowed among these three groups, for a maximum total of 6 years and extensions may not extend past December 31, 2034. Only one-time, one-year extension may be granted from scheduling extensions for each engine.

Compliance extensions are not transferrable to the new owner after the sale of an engine or vessel. A person who purchases someone else’s in-use vessel is not eligible to apply for extensions, even if the previous owners applied for, and received approval for compliance extensions that have not yet expired when the vessel are transferred to the new owners.

1. Infrastructure Extension E1 – Extension for Infrastructure Delays.

The E.O. may grant an applicant a one-year compliance extension, renewable once for a total of two years, to the nominal compliance date set forth in subsection (i)(1) or subsection (e)(5.1) for any technology requiring infrastructure, due to unforeseen, temporary, or extenuating circumstances outside of the facility/vessel owner’s or

operator's control that prevents the installation or use of shore power or zero-emission fueling infrastructure, pursuant to the following procedures and requirements:

- a. The applicant, whether a vessel or facility owner/operator, shall submit an application to the E.O. at least 9 months prior to nominal compliance dates of engines or ZEAT vessels, or initial requirements to provide shore power, that includes the following information:
 - i. Start and end dates of the requested extension period;
 - ii. A description of the circumstances necessitating the request for the compliance extension;
 - iii. Documentation that supports the finding of circumstances requiring an extension, such as but not limited to documentation from the electrical utility, third-party engineering evaluations, or site-specific physical constraints requiring additional time for safety review, or other documentation of extenuating circumstances; and
 - iv. Efforts taken to mitigate future need for the extension.

- b. The applicant may apply for an additional one-year extension no later than 9 months and no earlier than 12 months before the expiration of the extension. In such a case, the applicant shall once again be required to demonstrate that the conditions set forth in subsection (e)(6.1)(E)1.a. above have been met.

2. Feasibility Extension E2 – No Certified Engines or DPFs Available.

- a. If there are no certified engines or DPFs available to meet performance standards by applicable compliance dates, a renewable two-year extension may be granted if demonstrated by the applicant.

- b. The application package must be supplied to the E.O. no later than 9 months and no earlier than 12 months by the applicable compliance date for the initial application or before the previous extension expires for the renewal.

- c. Documentation must include an evaluation of all U.S. EPA certified engines meeting applicable performance standards, and all CARB verified DPFs by the applicable compliance date. Engineering analysis must be provided indicating that no combination of

certified engines could be used in lieu of engines of the original horsepower rating to perform the work of the original vessel design. Applicants must consider engines within a reasonable range of power ratings, power densities, and other vessel powertrain modifications, including but not limited to engine controls, azimuth drives and propeller configurations. The compliance extension described in this paragraph shall only consider availability of engines and/or DPFs, and at no point can the cost of the modifications be considered to be granted this compliance extension.

- d. In situations where engines certified to current Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road are available but DPFs are not available, the person must repower the vessel with the available Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road engines and submit an engineering analysis to evaluate the availability of DPFs every two years. Compliance dates shown in Tables 12, 13 and 14 are based on the model year of the original in-use engine. A person must retrofit the vessel with a DPF within 6 months after a DPF becomes available for the engine installed in the vessel, and the last compliance extension pursuant to this extension expires.
- e. If a DPF becomes available for a different engine make or model with the same power and duty cycle rating, the applicant can still demonstrate a lack of availability of a verified DPF. To demonstrate lack of engine and DPF availability under this subsection, a person applying for this extension, who would also need to repower their engine with one certified to a more stringent standard (i.e. repower a Tier 3 engine to a Tier 4 engine), would need to consider all available engines for the power and duty cycle rating of their operation, regardless of engine manufacturer or engine model.

3. Feasibility Extension E3 – Tier 4 Engines or DPF not Feasible and Cannot Afford Vessel Replacement.

The extension applies to in-use harbor craft where engines and DPFs are available for the intended application, but vessels cannot be reconfigured or modified to meet performance standards without replacing the vessel, and the owner or operator cannot pay for a replacement vessel by the applicable compliance date of the engine. For the purpose of reviewing and granting extensions, modifications requiring extension of the vessel length or resulting in a passenger capacity reduction of 50 percent or more are considered not feasible.

The E.O. may grant to an applicant a two-year extension, which can be renewed for up to a total of six years for all vessel categories, if demonstrated that no suitable engines or control technologies physically fit within the existing vessel structure, and no amount of modifications can be made to the vessel structure without compromising its structural integrity, to meet requirements of subsection (e)(6.1), and removing the vessel from service and replacing it with a newly acquired vessel with compliant engines is not financially possible.

In granting or denying the extension request, the E.O. will rely on any information submitted by the applicant and utilize staff's engineering judgment to evaluate technical feasibility. For purposes of this subsection, the E.O. may not approve this compliance extension for engines on the vessel if the replacement engine and the retrofit device can fit within the vessel after modification and reconfiguration, and installation of the replacement engine and the retrofit device would not cause the vessel to violate U.S. Coast Guard requirements.

The application for and issuance of an initial extension and subsequent extensions pursuant to this subsection are subject to the following requirements:

- a. For the initial extension and all subsequent extensions to be granted pursuant to this subsection, the applicant must submit the following:
 - i. for extensions to repowering engines, technical feasibility analysis demonstrating that no certified engine can be used to repower engines meeting performance standards on the vessel(s);
 - ii. for extensions to installing DPFs, technical feasibility analysis demonstrating that no DPF can be used to retrofit Tier 3 or Tier 4 engines on the vessels;
 - iii. for extensions to repowering engines or installing DPFs, technical feasibility analysis provided by a third-party naval architect demonstrating that no modifications are feasible to repower and retrofit the vessel. Modifications requiring the vessel length to be extended or modifications or reconfigurations resulting in a passenger capacity reduction by more than 50 percent are considered not feasible;

- iv. for extensions to replacing the vessel, financial analysis demonstrating that compliance by the compliance dates associated with removing the vessel from service and/or replacing the vessel with a new build compliant vessel will cause a financial hardship for the vessel owner; and
- v. for extensions to repowering engines or installing DPFs or replacing the vessel, additional data requested by CARB for the E.O. to perform analysis using existing U.S. EPA models such as ABEL, INDIPAY, or MUNIPAY, to evaluate an entity's ability to afford compliance costs.

For each engine identified in feasibility analysis above, the person must provide in the application a detailed description of the reasons and factors that serve as the basis for the claim that compliance for the vessel is not feasible. This description must include, at a minimum, detailed engineering diagrams, calculations, and citations to applicable U.S. Coast Guard regulations that support the person's claim that compliance for the vessel is not feasible.

- b. The person must identify in the application each engine for which the extension is requested, and demonstrate that all other engines within the fleet subject to the person's direct control meet the requirements of this section.
- c. The person must submit the application for an extension so that it is received by the E.O. no later than 18 months before the nominal compliance date of the engine(s) or vessel(s) for which the extension is requested.
- d. The person must demonstrate that meeting the performance standards in Tables 7, 8, and 9 is not feasible, and separately that repowering the vessel with an engine meeting the current marine or off-road emission standards in effect is not feasible. In situations where it is feasible to repower with engines meeting current Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road emission standards, but it is not feasible to meet the performance standards in Tables 7, 8, or 9, the person must repower the vessel with the cleanest available Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road certified engine. A person may apply for a compliance extension for installing a DPF only relative to the dates shown in Tables 12, 13, and 14 based on the model year of the in-use engines that were

installed as of December 31, 2022, unless the applicant is complying with Method C4.

- e. After the initial extension, the E.O. may grant two additional two year extensions for all regulated in-use vessel types except workboats, which are not limited to a total of six years of compliance extension, provided the following requirements are met:
 - i. All requirements specified in paragraph (e)(6.1)(E)2.a and (e)(6.1)(E)2.d above are followed;
 - ii. The application for an additional extension demonstrates the engines identified in paragraph (e)(6.1)(E)2.b remain in compliance with this section;
 - iii. The application is received by the E.O. no later than 9 months and no earlier than 12 months before the expiration of the previous extension;
 - iv. The application identifies the engine(s) for which the additional extension is requested; and,
- f. Except for dedicated workboats that do not operate above the low use exceptions as set forth in subsection (e)(7) for any other type of vessel category, no compliance extensions can be approved pursuant to this pathway in subsection (e)(6.1)(E)3 if either 6 years of any extension has been granted or if compliance dates for any engine will be extended beyond December 31, 2034.

4. Feasibility Extension E4 – Tier 4 Engines with Limited Operating Hours and DPFs not Feasible

- a. This provision includes a renewable two-year extension that applies to regulated in-use vessels equipped with Tier 4 marine or Tier 4 Final off-road engines, where DPFs are available for Tier 4 engines on the vessel but DPFs do not fit the vessel based on feasibility analysis. Applicants must submit technical feasibility analysis performed by a third-party naval architect to the E.O. 9 months prior to nominal compliance dates, or prior to the expiration of a previous extension using this provision, along with documentation of annual operating hours for the vessel.
- b. The application package must demonstrate that meeting Tier 4 + DPF performance standards is not technically feasible without

replacing the vessel due to fitment feasibility (modifications requiring extending vessel length or lowering passenger capacity by more than 50 percent are considered not feasible), and the vessel has not, and will not operate above the annual hour thresholds listed in Table 16. For the evaluation periods for determining past operational hours, applicants should follow procedures for low use exceptions set forth in subsection (e)(7).

- c. For barge and barge-mounted dredge vessels to be eligible for this extension, all auxiliary engines must meet Tier 4 marine or Tier 4 Final off-road standards. If present, any main propulsion engines on barges or barge-mounted dredges will not need to meet Tier 4 standards or operated below the limits in Table 16 to be eligible for this extension.
- d. For all other regulated in-use vessel categories, except for barges and barge-mounted dredges, to be eligible for this extension, all main propulsion engines must meet Tier 4 marine or Tier 4 Final off-road standards. Auxiliary engines onboard regulated vessel categories except for barges and barge-mounted dredges will not need to meet Tier 4 standards or operated below the limits in Table 16 to be eligible for this extension.
- e. In the case of Tier 4 engines operating beyond the applicable threshold hours in any calendar year, any compliance extensions granted pursuant to this subsection is terminated. A person must notify the E.O. within 30 days, and take vessel out of service or bring their vessel into compliance.

**Table 16: Annual Operating Thresholds for Feasibility Extension (E)(4)
Applicability**

<u>Homebase or Regularly Scheduled Stop Location</u>	<u>Extension Available if Operating Below</u>
<u>All Other Areas</u>	<u>2,600 hours/year</u>
<u>Within 2 Miles of a DAC</u>	<u>1,300 hours/year</u>

5. Scheduling Extension E5 – Equipment Manufacturer Delays or Installation Difficulties.

This extension applies to cases where there are equipment manufacturer delays or installation difficulties, or multiple engines on multiple vessels with same compliance dates, or multiple engines on single vessel with different compliance dates.

Upon written request, the E.O. may grant to an applicant a one-time, one-year extension to the applicable compliance date set forth in subsection (e)(6.1)(D) or (e)(6.2), provided all the following criteria are met:

- a. the applicant ordered the new replacement engine or other equipment necessary to comply with the requirements of subsection (e)(6.1)(C) or (e)(6.2) prior to the applicable compliance date set forth in subsection (e)(6.1)(D) or (e)(6.2); and
- b. the purchase order identified in paragraph a above was placed with the manufacturer no later than 6 months before the engine's applicable compliance date; and
- c. the new engine or equipment has not been received or installed since it was ordered due to manufacturing delays or excessive difficulties encountered by the engine or equipment installer; and
- d. the applicant for the extension provides documentation to the E.O.'s satisfaction that demonstrates the criteria in subparts a. through c. above have been met. The E.O. may, in his/her sole discretion, use any information available to rebut any of the documentation submitted pursuant to subparts a through c above.

6. Scheduling Extension E6 – Multiple Engines on Multiple Vessels with Same Compliance Dates.

This provision applies only to fleets of 2 or more regulated in-use vessels subject to subsection (e)(6.1) that are owned by the same person. Upon written request, the E.O. may grant an extension to the applicable compliance date(s) for engines on vessels within such fleets, as set forth below:

- a. If two or more engines on a vessel have the same compliance date as two or more engines on another vessel, or if each single engine on three or more vessels have the same compliance date, the E.O.

may grant to a person a one-time, one-year extension of the applicable compliance date. To receive an extension under this provision, the applicant must submit a written request to the E.O. that meets the following requirements:

- i. The request must be received by the E.O. no later than 9 months prior to the applicable compliance date; and
- ii. The request identifies the engines and the vessels in the person's fleet that are subject to the requested extension.

7. Scheduling Extension E7 – Multiple Engines on Single Vessel with Different Compliance Dates.

Upon written request, the E.O. may grant to the applicant an extension to the applicable compliance date(s) for engines on regulated in-use vessels subject to subsection (e)(6.1) within such fleets, as set forth below:

- a. For each set of engines (a "set" means two or more engines) on a single regulated in-use vessel with different compliance dates, the E.O. may grant to an applicant a one-time, maximum one year extension to one in-use engine that the applicant chooses for the extension. To receive an extension under this provision, the applicant must submit a written request to the E.O. that meets the following requirements:
 - i. The request must be received by the E.O. no later than 9 months prior to the applicable compliance date for the engine with the earlier compliance date; and
 - ii. The request must identify the vessel and engines that are subject to the requested extension, including vessel name, engine type, engine serial number, engine model year and nominal compliance date.

(F) Special Provisions Applicable to the Use of a DPF and Other Verified Diesel Emission Control Strategies (VDECS).

The following requirements apply to any person's use of a DPF and Other VDECS pursuant to subsections (e)(4.1), or (e)(5.1) or (e)(6.1) or (f) and are in addition to any other applicable requirements:

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1. Once the VDECS is installed on an applicant's vessel, the applicant must continue to operate and maintain the VDECS, in accordance with the manufacturer's directions, to achieve the original level of emission reductions that the VDECS was designed and intended to achieve;
2. In the event a VDECS fails, breaks down, or is otherwise damaged (collectively referred to hereinafter as "fail" or "failure"), the vessel owner or operator must, within 90 days of the VDECS failure, do at least one of the following:
 - a. repair the VDECS to good working order;
 - b. replace the failed VDECS with another working VDECS, if it cannot be repaired; or
 - c. employ another method that meets the requirements of subsection (e)(6.1)(C) and other applicable provisions of this section, if the VDECS cannot be repaired.
3. The determination in subpart 2.b and 2.c above of whether a VDECS cannot be repaired may only be made by either the VDECS manufacturer or an authorized dealer or installer.
4. If a VDECS is replaced within 90 days of failure, the original failed VDECS may only remain on the vessel if it is not connected to the exhaust manifold of the engine for which it was originally installed.

(6.2) In-Use Engines on Commercial Fishing Vessels – Requirements for Meeting Tier 2 and Higher Emission Standards.

Beginning January 1, 2023, a person who owns, operates, sells, purchases, offers for sale, leases, rents, imports, or otherwise acquires an in-use commercial fishing vessel with a pre-Tier 1 - or Tier 1-certified marine or off-road engines may not own, operate, sell, purchase, offer for sale, lease, rent, import, or otherwise acquire an in-use engine, or a commercial fishing vessel, unless that engine meets U.S. EPA certified Tier 2 or higher emission standards by the applicable compliance date set forth in Table 17.

Table 17: Compliance Dates for Any Pre-Tier 1 and Tier 1 Certified Engines on Commercial Fishing Vessels

<u>Engine Model Year</u>	<u>Compliance Date</u>
<u>1987 and earlier</u>	<u>12/31/2030</u>
<u>1988 – 1997</u>	<u>12/31/2031</u>
<u>1998 and later</u>	<u>12/31/2032</u>

[Note: For example, if a 1993 model year diesel engine on a commercial fishing vessel operating in Regulated California Waters, the owner or operator must bring the engine into compliance with the requirements of subsection (e)(6.2) by December 31, 2031.]

(7) Low Use Exceptions.

Beginning January 1, 2023, in lieu of meeting the requirements set forth in subsection (e)(6.1), (e)(6.2) or meeting the ZEAT requirements set forth in subsection (e)(5.1), a person may apply for low use exceptions to be able to operate engines not meeting the performance standards or ZEAT requirements in Regulated California Waters.

(A) E.O. Approval.

E.O. approval letter must be obtained prior to engine’s applicable compliance date set forth in subsection (e)(6.1)(D), (e)(6.2), or applicable compliance dates as a result of receiving compliance extensions, or entering RCW if vessels come from outside of RCW.

(B) Requirements.

1. Low use exception requires that the applicable engine has not, and will not be operated more than the limits set forth in Table 18 based on vessel category and engine tier standard in a calendar year. A vessel is considered to be operating in a DAC if it has a homebase or has any regularly scheduled stops within 2 miles of a DAC.
2. No low use exceptions shall be approved unless all engines on all vessels within the fleet subject to the person’s direct control comply with the requirements of this section.
3. No more than five vessels within a person’s direct control based outside of California shall be eligible for this exception per calendar year. There is no limit to the number of vessels within a person’s fleet that are eligible for this low use exception if the vessels operate within RCW the majority of the time.
4. In-use vessels that are newly acquired after January 1, 2023 are not eligible for low use exceptions.

Table 18: Annual Low Use Hours Limits for Engines on Regulated In-Use Vessels with a Homebase or Regularly Scheduled Stops Within 2 Miles of a Disadvantage Community (DAC) and All Other Areas

<u>Engine Tier</u>	<u>Pre-Tier 1</u>	<u>Tier 1</u>	<u>Tier 2</u>	<u>Tier 3 or 4</u>
<u>Limits – All Other Areas (hours/year)</u>	<u>80</u>	<u>300</u>	<u>400</u>	<u>700</u>
<u>Limits – DACs (hours/year)</u>	<u>40</u>	<u>150</u>	<u>200</u>	<u>350</u>

(C) Initial Low Use Application for E.O.'s Review.

1. Applicants must submit an application package at least 60 days prior to engine's applicable compliance date, or 60 days prior to a vessel entering RCW.
2. The application package, at a minimum, must contain:
 - a. A formal request letter that includes the following:
 - i. a table to identify applicable vessels and engines from the latest report, including vessel name and Unique Vessel Identifier (UVI), engine type, make, model year, serial number and engine family name if applicable;
 - ii. current hour meter reading and evidence showing the engine is equipped with a functioning non-resettable hour meter;
 - iii. supporting documents (such as but not limited to logbooks or records indicating hour meter readings on past dates) to demonstrate that the engine has not operated more than the limits specified in Table 18 in the previous calendar year (January 1 to December 31), and is not expected to operate more than the specified limits in the current year of demonstration and subsequent calendar years. If a vessel has operated outside of California for the majority of the time, no demonstration of annual operation hours in the previous calendar year is required.

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- iv. activity plans or commitment to demonstrate that the engine will not operate more than the limits specified in Table 18 in the subsequent years following the demonstration;
 - v. if engines are used in capacities not for regulated work, such as personal pleasure, these hours do not count toward the limits specified in subsection (e)(7)(B) only if they are clearly documented in logbooks for past operation and future activity plans demonstrate how future work as regulated in-use vessels will remain below applicable limits; and
 - vi. the vessel name and UVI of all other vessels that have approved low use exceptions and are currently operating within Regulated California Waters in the current calendar year.
- b. A letter or attestation from a certified third party Society of Automotive Engineers (SAE) certified technician or Original Equipment Manufacturer (OEM) engine factory, distributor, or dealership certified technician demonstrating that the engine is in proper operating condition.

(D) Renewal Application (Every Three Years).

The E.O. approval letter shall be subject to renewal every three years. Applicants must submit the renewal application at least 60 days before the previous approval letter expires. The Renewal Application package must contain the same information as the Initial Low Use Application, and include records of annual operation hours for the past three years for supporting documents in (C)3.a.iv above of this subsection.

(E) Revocation of Approved E.O. Letter.

The E.O. may revoke or modify, as needed, an approved Low Use Exception Letter if the E.O. determines that the approved application can no longer meet or comply with the requirements of this subsection.

(f) **Alternative Control of Emissions (ACE).**

The purpose of this subsection is to allow a person ("person" or "applicant") the option of applying alternative strategies to achieve equivalent or additional emission reductions relative to requirements of subsection (e)(6.1).

(1) Requirements for Alternative Control of Emissions (ACE)

- (A) ~~The purpose of this subsection is to allow a person ("person" or "applicant") the option of complying with the requirements of this subsection in lieu of the requirements of subsection (e). As set forth in this subsection, a person may be deemed in compliance with subsection (e) by implementing an alternative emission control strategy(ies) (AECS) approved by the E.O. In no case may the E.O. approve an AECS that results in or has the potential to result in any increase of diesel PM and NO_x emissions or any increase in emissions greater than 10 percent for any other pollutant, relative to the emissions of diesel PM, NO_x, and other pollutants that would have occurred under compliance with subsection (e).~~

An applicant must establish that the ACE achieves equivalent or greater emissions reductions than if the applicant were to directly comply with subsection (e)(6.1), which is considered the Nominal Compliance Baseline. The ACE can include alternative emission control strategy(ies) (AECS) approved by the E.O. as set forth in subsection (f)(1)(E) below. For the purpose of demonstrating equivalent or greater emission reductions, the applicant must evaluate emission reductions of PM and NO_x for a time period from January 1, 2023 through December 31, 2034, relative to the Nominal Compliance Baseline with a maximum of 2 years of any feasibility extension with documentation submitted according to the requirements set forth in subsection (e)(6.1)(E)(2-4).

- (B) An applicant wishing to participate in an ACE may include one or more harbor craft in the ACE, but the applicant may only include harbor craft that the person owns or operates under the person's direct control.
- (C) No harbor craft may be included in more than one ACE plan.
- (D) Harbor craft included in an ACE must continue to be included in and operated pursuant to the approved ACE for the duration of the ACE.

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(E) AECS may only apply to emissions from harbor craft subject to this section, and may not apply to other mobile or stationary source categories. AECS may include, but are not limited to, any combination of the following:

1. engine modifications;
2. exhaust treatment control;
3. engine repower;
4. use of alternative fuels (except for R100) or fuel additives;
5. shore-side power;
6. fleet averaging, including ZEAT vessels unless they have been separately used to generate or received a ZEAT credit as set forth in subsection (e)(5.2); and
7. CARB Approved Emission Control Systems (CAECS); and
8. any other measures that sufficiently reduce emissions.

CAECS may be used in an ACE application to meet the performance standards required in subsection (e)(5.1) and (e)(6.1). To receive the E.O.'s approval, the application must meet the following requirements:

- i. the CAECS must be approved pursuant to At Berth Regulation, title 17 section 93130.5; and
- ii. the applicant must demonstrate that the CAECS is applicable to the harbor craft specified in the application and meet the performance standards.

For purposes of the demonstration, the E.O. may request additional emissions testing based on good engineering judgment.

(F) A person complying under this provision must obtain E.O. approval of an ACE application that demonstrates compliance with this subsection and contains, at a minimum, the following information:

1. the company name, address, and contact information;
2. the harbor craft and engine(s) subject to the ACE, including the vessel name and identification number(s), engine make, model, and serial numbers, and other information that uniquely identify the engine;
3. documentation, calculations, emissions test data, or other information that establishes the diesel PM and NO_x reductions, expressed in pounds, are equal to or greater than the emission reductions that would have been achieved upon compliance with subsection (e), including but not limited to the requirements specified in subsection

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(e)(6)(C) and (e)(6)(D) prior to January 1, 2023 and in subsection (e)(6.1)(C) and (e)(6.1)(D) on and after January 1, 2023; and

4. the proposed recordkeeping, reporting, monitoring, and testing procedures that the applicant will use to demonstrate continued compliance with the ACE.

(G) For each ACE, the emission reduction calculations demonstrating equivalence with the requirements of subsection (e)(6.1) may include only those diesel PM and NO_x emissions from harbor craft ~~with its homeport~~ within their fleet operating within a single specified California air district basin, or another defined geographic area approved by the E.O.

(H) A person subject to an approved ACE must maintain operating records in the manner and form as specified by the E.O as an element of any approved ACE. Required records must include, at a minimum:

1. all the reporting and recordkeeping requirements specified in subsections ~~(g)(m) and (h)(n)~~ (m) and (n.1) on and after January 1, 2023;
2. maintenance procedures; and
3. emissions test results.

A person subject to an approved ACE must retain records and reports on each vessel or at an ~~vessel owner/operators office at the vessel's homeport~~ for the lifetime of each engine and must submit these records and reports to the E.O. in the manner specified in the approved ACE or upon request by the E.O.

(I) Emission reductions included in an ACE may not include reductions that are otherwise required by any local, State, or federal rule, regulation, or statute, or that are achieved or estimated from equipment not located in the region to which the ACE applies. On or after January 1, 2023, emission reductions funded, either partially or fully, through public air quality or emission reduction incentive programs, may not count toward the projected reductions in a person's ACE application. A person who has received other funding or grants unrelated to air quality can include vessels and engines receiving that funding in an ACE application.

(J) A person subject to an approved ACE may not operate any harbor craft under the ACE unless the person has first been notified in writing by the E.O. of the ACE's approval. Prior to such approval, the applicant must comply with the provisions of this section, including the requirements in

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subsection (e)(6)(C) and (e)(6)(D) prior to January 1, 2023 and in subsection (e)(6.1)(C) and (e)(6.1)(D) on and after January 1, 2023.

(K) Applicants shall demonstrate that their ACE will not result in a higher burden to DACs relative to other communities impacted by the emissions from their vessel operations.

(2) Application Process for ACE.

(A) Prior to January 1, 2023, aApplications for an ACE must be submitted in writing to the E.O. for evaluation by February 28 of the first year that vessel engine compliance is required. After January 1, 2023, applications for an ACE must be submitted at least 6 months prior to the first date that vessel engine compliance is required, and no later than December 31, 2025.

(B) The E.O. shall establish an internet site ("ACE internet site") in which all documents pertaining to an ACE application shall be made available for public review. The E.O. shall also provide a copy of all such documents to each person who has requested copies of the documents; these persons shall be treated as interested parties. The E.O. shall provide two separate public comment periods during the ACE application process, as specified in subsection (f)(2)(D) and (f)(2)(E).

(C) Completeness Determination.

Within ~~15~~30 days after receiving an ACE application, the E.O. shall notify an applicant whether the application is deemed sufficiently complete to proceed with further evaluation. If the application is deemed incomplete, the notification shall identify the application's deficiencies. The applicant shall submit the supplemental documentation within 30 days of receiving a notification the application is incomplete. The E.O. shall have an additional ~~15~~30-day period for reviewing each set of documents or information submitted in response to an incomplete determination. Nothing in this subsection prohibits the E.O. from requesting additional information from the applicant, during any part of the ACE application process, which the E.O. determines is necessary to evaluate the application.

(D) Notice of Completeness and 30-Day First Public Comment Period.

After an ACE application has been deemed complete, within 30 days the E.O. shall provide a 30-day public comment period to receive comments on any element of the ACE application and whether the E.O. should approve or disapprove the ACE application based on the contents and merits of the application. The E.O. shall notify all interested parties of the following:

1. the applicant(s);
2. the start and end dates for the 30-day first comment period; and
3. the address of the ACE internet site where the application is posted.

The E.O. shall also make this notification available for public review on the ACE internet site.

(E) Proposed Action and 15-Day Second Public Comment Period.

Within 30 days after the first public comment period ends, the E.O. shall notify the applicant and all interested parties of CARB's proposed approval or disapproval. This notification shall propose to approve the application as submitted, disapprove the application, or approve the ACE application with modifications as deemed necessary by the E.O. The notification shall identify the start and end dates for the 15-day second public comment period.

During the second public comment period, any person may comment on the E.O.'s proposed approval or disapproval of the ACE application and any element of the application. The E.O. shall also make this notification available for public review on the ACE internet site.

(F) Final Action.

Within ~~45~~30 days after the second public comment period ends, the E.O. shall take final action to either approve or deny an ACE application and shall notify the applicant accordingly. If the application is denied or modified, the E.O. shall state the reasons for the denial or modification in the notification. The notification to the applicant and approved ACE plan, if applicable, shall be made available to the public on the ACE internet site. In addition, the E.O. shall consider and address all comments received during the first and second public comment periods, and provide responses to each comment on the ACE internet site.

(G) Renewal of an Approved ACE.

An applicant may apply for renewal of an approved ACE by forwarding the E.O. updated information for all elements of the approved ACE for review and re-approval. The applicant must submit the renewal application so that the E.O. receives the application no later than 30 days prior to the end of the ACE compliance period.

(H) Notification to the E.O. of Changes to an Approved ACE.

A person with an approved ACE must notify the E.O. in writing within 30 days upon learning of any information that would alter the emissions estimates submitted during any part of the ACE application process. If the E.O. has reason to believe that an approved ACE has been granted to a person that no longer meets the criteria for an ACE, the E.O. may, pursuant to subsection (f)(3) below, modify or revoke the ACE as necessary to assure that the applicant and subject vessel(s) meet the emission reduction requirements in this section.

(3) Revocation or Modification of Approved ACE.

With 30 days of notice of violation to the ACE holder, the E.O. may revoke or modify, as needed, an approved ACE if any of the following apply:

- (A) there have been multiple violations of the ACE provisions or the requirements of the approved ACE plan;
- (B) the E.O. has reason to believe that an approved ACE has been granted that no longer meets the criteria or requirements for an ACE; or
- (C) the person can no longer comply with the requirements of the approved ACE in its current form.

Public notification of a revocation or modification of an approved ACE shall be made available on the ACE internet site.

(g) Unique Vessel Identifier Requirement.

- (1) All harbor craft operating in Regulated California Waters are required to have a CARB Unique Vessel Identifier (UVI).

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(A) The CARB UVI is a unique set of letters and numbers in a format of "CARB 01234" that is assigned to a vessel to ensure traceability and permanent identification of the vessel.

(2) Requirements.

(A) On or before January 1, 2024 all harbor craft will need to have their CARB UVI permanently affixed to their vessel.

(B) Beginning March 1, 2023, or within 30 calendar days of fulfilling the vessel registration and reporting requirements in subsection 93118.5(m) and 93118.5(n.1), whichever occurs later, the E.O. shall issue CARB UVI numbers via electronic mail or hard copy mailed to the business address provided on the application.

(C) Vessel owners or operators shall permanently affix or paint the identification number in clear view according to the following specification:

1. Letters and numbers shall be readily legible during daylight hours. Each character of the CARB UVI must be at least 5 inches (12.7 centimeters) in height and 2.5 inches (3.8 centimeters) in width.
2. Each character of the CARB UVI must remain legible for the entire life of the vessel.
3. Letters and numbers shall be black and the background surface shall be lime green with decimal code (R,G,B) – (0,255,0) on which the letters and numbers are placed. The lime green CARB UVI label background shall measure at least 40 inches in width and 10 inches in height. CARB issued UVIs may be either affixed as printed labels or painted onto the vessel.
4. CARB UVI shall be installed and fixed to both sides of the pilot house in a visible location but not obstructing captain/pilot view. If the vessel does not have a pilot house, another visible location on both sides of the vessel can be selected.
5. Marking shall be kept maintained in a manner that retains the legibility required by the subparagraphs (C)(1-4) immediately above.

(D) Registered historic vessels are allowed to install cast bronze, brass, or carved wooden plaques, or other UVI format matches their vessel's theme, but shall meet the specifications (C)(1),(2),(4) and (5) described above.

(h) Main Engine Idling and Auxiliary Engine Operating Limits.

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All harbor craft subject to this section shall meet the following requirements. Any failure to perform any specific items in this subsection shall constitute a separate violation for each calendar day that the failure occurs.

- (1) Beginning on January 1, 2024, no vessel subject to this regulation may idle propulsion engines or operate auxiliary engines with a power rating of 99 kW or less for more than 15 consecutive minutes when docked, berthed, or moored at any facility. Prior to reaching the idling or operating limit a harbor craft shall shut down its engine(s). The idling and operational limits do not apply to:
 - (A) idling or operation for testing, servicing, repairing or diagnostic purposes;
 - (B) idling of operation necessary to accomplish work for the vessels intended use, including, but not limited to, ship-assist tug vessels while at dock if it is in position to maneuver another vessel away;
 - (C) operation of direct-drive or other non-generator specialty auxiliary engines while at a dockside location;
 - (D) idling or operation that meets the definition of emergency operations;
 - (E) idling or operation at facilities where shore power is not installed or not required pursuant to vessel visit thresholds as defined in subsection (i);
 - (F) idling or operation for up to 30 consecutive minutes for the initial start-up of a vessel each day, or new working shift on any vessel type.
- (2) Vessel owner and operator shore power responsibilities. If elected as an idling compliance strategy, vessel owners and operators are responsible for the installation, maintenance, and operation of equipment on their vessel to enable a shore power connection.
- (3) If vessel owners or operators require use of harbor craft shore power, the facility operator must provide access to power and accessible connection points as outlined in subsection (i)(1).

(i) Facility Infrastructure Requirements.

- (1) Facility Owner and Operator Shore Power Requirements.

Facility owner and operators shall be jointly responsible to provide land-side shore power infrastructure sufficient to provide all auxiliary power needs up to 99 kW on a

vessel while at dock after it shuts off its auxiliary engines to comply with the requirements set forth in subsection (h).

- (A) The requirements of this subsection apply to any facility that allows more than 50 vessel visits per year.
- (B) For the purpose of this subsection, a vessel visit is a period of time lasting between 1 and 24 hours where auxiliary engines operate and could use shore power at a facility. For example, 50 different vessels operating 2 hours each, or 1 single vessel operating consecutively for 50 days, would each equal 50 visits for a given facility.
- (C) Facility owners and operators are jointly responsible for purchasing, installing and maintaining all infrastructure to support vessel operator shore power requirements in subsection (h)(3) of this section. Shore power must be made available at all facilities by January 1, 2024.
 - 1. A facility owner or operator that is not able to install the infrastructure required by subsection (i)(1) by January 1, 2024, may request an extension of compliance from the E.O. following requirements outlined in subsection (e)(6.1)(E)(1).
- (D) Facility owners and operators are responsible for installing shore power up to 99 kW per vessel docking. Any vessel shore power needs greater than 99 kW per vessel are not the responsibility of facility operators.
- (E) If distributed generation is used to supply shore power, the electricity generated must meet the emissions standards defined in subsection (d)(xx).

(2) Facility Owner and Operator ZEAT Infrastructure Requirements.

The requirements of this subsection apply to any facility owner and operator allowing ZEAT vessels to dock or moor at its location.

- (A) Facilities that allow ZEAT vessels to dock or moor are required to aid vessel owners/operators by allowing the installation of charging or fueling infrastructure for zero-emission and other advanced technologies.
- (B) Facility owners and operators are jointly responsible for cooperating with vessel owners/operators to allow for the purchase, permitting, installation,

and maintenance of the necessary charging or fueling infrastructure required to effectively operate ZEAT vessels, including but not limited to:

- a. providing slips/berths that are best suited for the installation of fast-charging equipment;
- b. granting permission for truck-to-vessel fueling in designated locations; and
- c. if applicable, assisting ZEAT vessel operators to receive legal permissions from all authorities having jurisdiction at proposed locations.

(C) ZEAT vessel owners/operators own and are responsible for purchasing, installing and maintaining ZEAT infrastructure.

(j) Facility Compliance, Recordkeeping, and Reporting Requirements.

(1) Any facility owner or facility operator, including marine terminal owners and operators, that schedules marine traffic, which includes but is not limited to making arrangements for vessels to operate in Regulated California Waters and perform work to support facility operations, is responsible for the compliance of vessels that visit their facility with subsections (e), (f), (g), (h) and (k). A facility will be deemed to comply with this requirement if it obtains an attestation from each vessel owner or operator that berths or docks at its facility that the vessel is compliant with applicable requirements.

(2) Facility owners or facility operators, including marine oil terminal operators, shall provide a list of all vessel tenants subject to this section that have use agreements, to rent or lease a slip or dock, berth, or moor for seven (7) days or longer (per month) at the reporting facility, or any number of visits for a marine oil terminal. This list of vessel tenants shall be reported to CARB no later than January 1, 2023 and on a quarterly basis thereafter (by January 1, April 1, July 1, and October 1 of each calendar year), and shall follow the procedures set forth in subsection (s.1) and contain the following information:

(A) Facility Information.

1. Applicable facility name;
2. Applicable facility address, state, zip code;
3. Applicable facility geographic coordinates, using a series of latitude and longitude, or alternatively a geographic information system shape file or "geofence", delineating the property boundaries;
4. Property owner name;
5. Applicable facility owner or operator;
6. Applicable facility owner or operator address; and

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7. Responsible official and applicable facility owner or operator contact information.
- (B) Vessel CARB UVI, vessel name, vessel type, and if no CARB UVI is available, or prior to January 1, 2024, one of the following unique identifying numbers: US Coast Guard Documentation Number, California Department of Motor Vehicles CF number, or International Maritime Organization number.
- (C) Vessel owner/operator information including:
1. company name;
 2. company mailing address;
 3. primary contact;
 4. vessel owner/operator primary phone number; and
 5. vessel owner/operator e-mail address.
- (D) Start date of vessel and facility use agreement;
- (E) Dock, berth or slip location or number at facility;
- (F) If applicable, the end date of use agreement; and
- (G) If applicable, the end date of a use agreement indicating when a vessel has left the facility.
- (3) Facilities with land-side infrastructure to support use of shore power to provide on-board power to vessels while at dock, must report the following additional information by January 1, 2024, or within 30 days of infrastructure completion if built after January 1, 2024, and reporting shall be performed according to the procedures set forth in subsection (s.1):
- (A) Infrastructure type, manufacturer, serial number, installation date;
- (B) Equipment type supported, number of vessels supported, and number of plugs; and
- (C) Plug configuration, amperage, and voltage for each connection.
- (4) Beginning January 1, 2023, any person subject to this subsection shall retain and maintain daily records in English, which contain the following information

for at least three years following the date when the records were made, and be supplied to the E.O. within 30 days of a request from CARB staff:

(A) Date, local time, and position (e.g. slip number) for each vessel tenant, and if applicable, the date of vacancy for each vessel tenant.

(k) Opacity Testing and Emission Control Repair Requirements.

This subsection applies to all main propulsion and auxiliary engines operating on all vessels, including swing engines, low use engines regardless of engine model year, engine tier level or compliance date. Applicable opacity limits set forth in subsection (k)(3) must be met whenever the test procedure is administered.

(1) Test Procedure and Repair Requirements.

Opacity shall be performed, measured, and evaluated using Society of Automotive Engineers "Surface Vehicle Recommended Practice, Snap Acceleration Smoke Test Procedure for Heavy-Duty Powered Vehicles" (SAE J1667, February 1996), which is incorporated by reference herein.

(A) For the purpose of this subsection, smoke opacity shall be measured after DPF (if installed) but before muffler or any seawater injection into exhaust utilizing either full- or partial-flow meter.

(B) The following test sequence shall be used for adapting the SAE J1667 test procedure to main propulsion engines:

1. Transit vessel to a safe location in open waters
2. Stop vessel, clutch-in with engines at idle
3. Transition controls from idle to full load within 2 seconds
4. Record opacity measurement for 15 seconds or until engines reach full power, whichever is longer
5. Repeat test procedure five more times
6. Final opacity measurement will be the average of the 0.5-second maximum of the last three accelerations

(C) Individuals conducting opacity tests must have completed training from the California Council on Diesel Education and Technology and obtained certification on the proper administration of the specified test procedure. The E.O. may approve or offer alternative training courses that satisfy this requirement.

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- (D) If it can be demonstrated that complying with the requirements of subsection (k) is not feasible due to a safety concern, or the engine configuration, then an alternative method of compliance may be used if approved by the E.O. In approving a request for use of an alternative method, the E.O. shall consider whether the owner/operator is able to demonstrate that alternative method will be able to detect increase in soot accumulation rates in the aftertreatment control device and be able to provide necessary maintenance and repair.
- (E) CARB has authority to perform confirmatory opacity testing in the field, or audit opacity test records at any time. In addition, regardless if an engine meets opacity limits, if CARB receives a public smoke complaint or otherwise receives information that an engine is being operated with emission control malfunctions, CARB may request engine maintenance records and require a certified dealer/distributor engine inspection by a certified technician. The owner/operator is responsible for performing any corrective action, including but not limited to repairs or rebuilding the engine. Failure to bring the engine into OEM specifications within 30 days is a violation of subsection (k).
- (F) Swing engines are not subject to subsection (k) when maintained at a dockside location, but are subject to subsection (k) once installed into a vessel with regulated in-use engines.
- (G) If an engine does not meet opacity limits set forth in subsection (k)(2), and the vessel owner or operator can demonstrate that possible combination or number of repairs, including but not limited to a full rebuild of the engine, were successful to lower the opacity level of the engine, the E.O. may approve, on a case-by-case basis, that the engines may continue to operate with opacity greater than applicable limits.

(2) Opacity Limits for Main Propulsion and Auxiliary Engines.

No engine shall exceed the smoke opacity levels provided below when tested in accordance with this subsection.

- (A) Engines meeting the Tier 3 + DPF or Tier 4 + DPF performance standards, tested shall not exceed 5 percent smoke opacity.
- (B) Engines without DPFs tested shall not exceed 40 percent smoke opacity.

(3) Biennial Testing Requirements for Main Propulsion Engines.

- (A) By March 31, 2024, a vessel owner/operator subject to this subsection must perform opacity testing and report to CARB biennially (every two years) along with other reporting requirements outlined in subsection (n.1). For all engines, opacity testing must be performed and reported once every two year period, and is due to CARB by March 31 of each even-numbered calendar year (i.e. 2024, 2026, 2028, etcetera).
- (B) Engines with model year 2020 or newer model year engines are exempt from biennial testing in this subsection (k)(3) until the calendar year that is four years after the model year of the engine. For example, a 2021 model year engine is exempt until 2025, and the first opacity test of the engine must be performed and reported to CARB by March 31, 2026.
- (C) Opacity testing shall be performed on swing engines prior to the vessel entering normal revenue service unless the swing engines are model year 2020 or newer model years and are within the exemption period granted under subsection (k)(1)(B) until four years after the model year of the swing engine.
- (D) If any vessel(s) based outside of California will be in RCW for more than 30 consecutive days, opacity testing must be performed on all applicable engines within 30 days of entering RCW. The test results remain effective for two years from the date of the test.
- (E) If the opacity exceeds the applicable opacity limits set forth in subsection (k)(2), the engine shall be repaired within 30 calendar days from the date of the failed opacity test or the engine shall be taken out of service. The information shall be recorded as specified in subsection (m)(18). Before being put back into service the engine, DPF, or other emission control systems shall be repaired such that it meets the opacity requirements before being returned to service. A post-repair opacity test shall be performed to determine if the measured opacity is within the requirements in subsection (k)(2).
- (F) If the post-repair opacity measure is greater than the opacity requirements in subsection (k)(3), the engine shall remain out of service. The engine may be returned to service if it can be repaired so that the post-repair opacity meets opacity limits in subsection (k)(3).

(4) Opacity Compliance Requirements for Auxiliary Engines.

(A) Auxiliary engines are subject to meeting the opacity limits set forth in (k)(2) but are not subject to biennial testing requirements.

(B) If auxiliary engines do not meet opacity limits, vessel owner/operator has 30 days to take the engine out of service, perform necessary repairs, and notify CARB.

(l) Compliance Fee Requirements.

This subsection applies to owners or operators of all commercial harbor craft subject to this section, except for commercial fishing vessels:

- (1) Fees are assessed based on the number of main engines and number of vessels; no fees are assessed for auxiliary engines operating on harbor craft.
- (2) The E.O. shall assess and collect reasonable fees for deposit in the Certification and Compliance Fund to recover the estimated costs to the E.O. administering this subsection.
- (3) Fees shall be due and payable to CARB via XXX to the E.O. by January 1 of each calendar year beginning in 2023.
- (4) Fees are nonrefundable except in circumstances as determined by the E.O.
- (5) Owners or operators of vessels must submit fees to the E.O. in accordance with the fee schedule in Table 19.

Table 19. Annual Fees for Owners or Operators of Regulated In-Use Vessels

Category	Fee Amount
<u>Per vessel, for single-vessel fleets</u>	<u>\$349</u>
<u>Per vessel, for all other fleets</u>	<u>\$466</u>
<u>Per main engine, for single-vessel fleets</u>	<u>\$145</u>
<u>Per main engine, for all other fleets</u>	<u>\$193</u>
<u>Per main engine, if complying by low use exception as set forth in subsection (e)(7)</u>	<u>\$290</u>

For example, for a vessel in a multi-vessel fleet with two main engines, the vessel owner or operator shall pay a total of $\$466 + \$193 \times 2 = \$852$ per year for that one vessel. For a fleet with one vessel only, with three main engines total, one of which is

a low use engine, the vessel owner or operator shall pay a total of \$349 + \$145×2 + \$290 = \$929 per year.

(gm) Recordkeeping Requirements.

Beginning January 1, 2009, the owner or operator of a harbor craft must maintain the records specified in this subsection on the vessel or at the vessel's ~~homebase~~ homeport for the life of each engine subject to this section, including fleet swing engines and marinized land-based engines. The owner or operator must provide such records for inspection to an agent or employee of CARB upon request for all harbor craft subject to this section. Records may be provided as a hard copy, electronic, or any alternative reporting strategy approved by the E.O. Records provided by the person under this provision must include, at a minimum, the following (if applicable):

- (1) Owner or Operator Contact Information:
 - (A) Company name;
 - (B) Contact name, phone and fax number, ~~address,~~ and e-mail address;
 - (C) Address where vessel is registered prior to January 1, 2023; Address where company is located on and after January 1, 2023; and
 - (D) Reporting year.

- (2) Vessel information:
 - (A) Harbor craft name;
 - (B) Prior to January 1, 2023, Specify vessel use(s) (ferry, excursion vessel, tugboat, ocean-going tugboat, towboat, push boat, work boat, commercial fishing vessel, charter fishing vessel, crew and supply vessel, pilot vessel, or other if none of the preceding apply; On and after January 1, 2023, specify vessel use(s) (barge-ATB, barge-bunker, barge-other, barge-towed petrochemical, commercial fishing vessel, commercial passenger fishing vessel, crew and supply vessel, dedicated emergency response vessel, dredge, excursion vessel, ferry-catamaran, ferry-monohull, ferry-short run, pilot vessel, research vessel, tugboat-ATB, tugboat-escort/ship assistant, tugboat-push/tow, or workboat);
 - (C) Vessel homeport prior to January 1, 2023; Vessel homebase on and after January 1, 2023;
 - (D) Vessel build year;
 - (E) U.S. Coast Guard documentation number;
 - (F) California Fish and Game license number;
 - (G) International Maritime Organization (IMO) number;
 - (H) Call Sign number; and
 - (I) Maritime Mobile Service identity number.

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- (3) Engine Information (for each diesel engine on the vessel, including swing engines):
- (A) Current hour meter reading;
 - (B) Make of engine;
 - (C) Model of engine;
 - (D) Engine family (if applicable);
 - (E) Engine serial number;
 - (F) Year of manufacture of engine (if unable to determine, provide its approximate age) prior to January 1, 2023; Engine model year on and after January 1, 2023;
 - (G) Rated brake horsepower;
 - (H) Total engine displacement; and
 - (I) Number of cylinders.
- (4) Operational Information:
- (A) Describe the general use of engine (propulsion or auxiliary engine);
 - (B) Total annual hours of commercial operation, based upon readings of the non-resettable hour meters for previous calendar year per engine, and records retained in the following item in this list;
 - (C) Total hours of operation per calendar year in each of the regulated in-use vessel categories, other commercial operation, and non-commercial operation within and outside of RCW, based upon readings of the non-resettable hour meters for previous calendar year per engine and as needed, daily operational logbooks;
 - (D) Estimated annual fuel usage per engine; and
 - (E) Estimated percent operating time as a function of distance from shore at the distances below:
 - 1. 0-3 nautical miles; and
 - 2. >3-24 nautical miles; and
 - 3. >24 nautical miles from shore.
- (5) Control Equipment (if applicable):
- (A) Type of diesel emission control strategy;
 - (B) Manufacturer of installed diesel emission control strategy;
 - (C) Model of installed diesel emission control strategy;
 - (D) Level of control – air pollutants controlled and percent reductions;
 - (E) Emission control serial number;
 - (F) Date control equipment installed.

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- (6) Maintenance records for each installed engine and diesel emission control strategy:
 - (A) Hour meter reading at last top end rebuild (i.e., less than full rebuild);
 - (B) Hour meter reading at last full engine rebuild; and
 - (C) Number of times full engine rebuild completed.

- (7) The retirement date for each near-retirement vessel for which an owner or operator is claiming an exemption pursuant to subsection (c)(13). This provision is only applicable until December 31, 2022.

- (8) This subparagraph is only applicable until December 31, 2022. For each engine for which the model year is determined using the "Engine's Model Year + 5" method pursuant to subsection (e)(6)(D)2:
 - (A) the name and contact information (representative, address, and phone number, and e-mail address) for the manufacturer of the emission control strategy
 - (B) the name and type of emission control strategy;
 - (C) the installation date of the emission control strategy; and
 - (D) if a VDECS is not being used for this purpose, the test plan, and the data demonstrating the emission reductions achieved due to the emission control strategy.

- (9) For each engine for which an owner or operator is claiming an extension pursuant to subsection (e)(6)(E)3 or (e)(6.1)(E)3, the purchase order or signed contract between the owner or operator and seller of the new engine or equipment that has been purchased to comply with subsection (e)(6)(C), ~~and~~ (e)(6)(D), (e)(6.1)(C) and (e)(6.1)(D).

- (10) For each engine an owner or operator claims to have replaced, for purposes of compliance with the requirements of (e)(6) or (e)(6.1), written documentation that the engine has been: dismantled, destroyed, or sold out of Sstate. Alternately, the engine may be used to replace an older engine if:
 - (A) The older engine is subject to the in-use engine requirements, and
 - (B) the original compliance date of the older engine is retained for the newer engine.

- (11) Records for each engine or VDECS must be retained by the owner or operator for the entire engine or VDECS life.

- (12) All records specific to an E.O. approved ACEP plan.

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- (13) All records specific to a BACT approved by the E.O. pursuant to subsection (e)(5). This provision is only applicable until December 31, 2022.

Beginning January 1, 2023, the owner or operator of a harbor craft must maintain the following additional records:

(14) Vessel Information:

- (A) A photo of the vessel;
- (B) Primary area(s) of vessel operation in RCW;
- (C) Vessel activity description;
- (D) Percent time operated in each vessel category;
- (E) Vessel overnight berthing/mooring location in RCW (if applicable), or specify whether vessel transits interstate continuously stopping only for commerce or at anchorages;
- (F) Whether the vessel operates exclusively or periodically in RCW;
- (G) California DMV CF number (if applicable);
- (H) Documentation of purchase transaction indicating the date, selling party, and purchasing party name; and
- (I) If sold, the date of sale, the purchasing entity name and contact information.

(15) Engine Information (for each diesel engine on the vessel, including swing engines):

- (A) General location on vessel (port, starboard, center, bow, upper deck, off-vessel swing engine, or other);
- (B) Engine Tier level (e.g. Off-Road Tier 3, Marine Tier 4, etcetera).

(16) Operational Information:

- (A) Record the operating time if a vessel is used to perform emergency operations.

(17) Control Equipment (if applicable):

- (A) Diesel Exhaust Fluid (DEF) consumption if engines equipped with Selective Catalytic Reduction (SCR) systems; and
- (B) Installer information (e.g. installer name, address, phone, and e-mail address).

(18) Records of Opacity Testing Results:

- (A) Brand name and model of the opacity meter;
- (B) Dates of last calibration of the opacity meter and chart recorder;
- (C) Name of the smoke meter operator who conducted the test;

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- (D) Name and address of the contracted smoke test facility or engine repair facility that conducted the test (if applicable);
 - (E) Unique Vessel Identifier (if issued) or other unique vessel identifier, vessel's engine model, engine make, engine model year, engine family number if applicable, engine serial number, and test date;
 - (F) Initial smoke test opacity levels (for three successive test readings) and average of the three readings;
 - (G) Indication of whether the engine passed or failed the initial smoke test;
 - (H) If test failed, date engine was taken out of service and hour meter reading on that date;
 - (I) For engines that have failed the smoke test and been repaired, the following information:
 - 1. name of the mechanic;
 - 2. date of the repair;
 - 3. hour meter reading at start of repair;
 - 4. a statement identifying the nature of the repairs made;
 - 5. an itemized list of parts used in the repair; and
 - 6. hour meter reading at end of repair.
 - (J) Post-repair test date and hour meter readings pre- and post-test;
 - (K) Post-repair smoke test opacity levels (for three successive test readings), and average of the three readings;
 - (L) Indication of whether the engine passed or failed the post-repair smoke test; and,
 - (M) Date engine put back in active service and current hour meter reading.
- (19) For each vessel adopting ZEAT, the following information shall be kept:
- (A) Manufacturer, model number, and model year of each component of a ZEAT system;
 - (B) Maintenance procedures for the component(s), engine(s) and its related equipment for powertrain;
 - (C) Hours of operation for any on-board combustion (e.g. diesel) engines and fuel usage; if a zero-emission vessel with a diesel engine is operated more than 20 hours/year, or combustion engine power on a zero capable hybrid vessel is operated more than 70 percent annually, documentation of the emergency operations performed while they are operated;
 - (D) Usage of any alternative fuels or additives;
 - (E) Hydrogen, electricity, or other zero-emission fuel usage; and
 - (F) All other records specific to a particular ZEAT required by its approval process or as required by the E.O. pursuant to subsection (e)(5.1)(C)1.

- (20) For each vessel adopting ZEAT, the following information about land-side zero-emission infrastructure (except for land-side shore power infrastructure) shall be kept:
- (A) Infrastructure type, manufacturer, serial number, installation date;
 - (B) Equipment type supported, number of equipment supported;
 - (C) Capacity (fuel/energy storage volume), amp/voltage; and
 - (D) Public or private use, number of plugs.

(hn) Initial and Compliance Plan Reporting Requirements (Applicable Until December 31, 2022).

- (1) Initial Reporting of California Harbor Craft Fleet. By February 28, 2009, a person subject to this section must submit the information specified in subsections ~~(g)(m)~~(1) through ~~(g)(m)~~(6) for all harbor craft vessels in his/her California fleet. For purposes of this paragraph, "California fleet" means the total population of harbor craft under the person's direct control as of January 1, 2009.
- (2) Compliance Plan. By February 28 of the year vessel engine compliance is required, a person subject to the requirements of subsection (e)(6)(C) and (e)(6)(D) must submit a Compliance Plan to the E.O. that describes in detail the engine replacements, rebuilds, upgrades, use of DECS, and any other measures the person plans to use to meet the requirements of subsection (e)(6)(C) and (e)(6)(D) for each of the person's engines and harbor craft. The person may revise the Compliance Plan, as needed, but the person must notify the E.O. within 10 business days of any changes to the Compliance Plan after the initial Compliance Plan is submitted. The Compliance Plan is for the E.O.'s informational and planning use only, and the substantive contents of the plan are not binding on either the E.O. or the person who submitted the Compliance Plan. The E.O.'s receipt and acceptance of a submitted Compliance Plan shall not constitute or be interpreted as evidence of compliance with the requirements of subsection (e)(6)(C) or (e)(6)(D).
- (3) Demonstration of Compliance. By no later than the applicable compliance date specified in subsection (e)(6)(D), a person subject to the requirements of subsection (e) must provide the following information to the E.O.:
- (A) All information specified in subsections ~~(g)(m)~~(1) through ~~(g)(m)~~(6), and

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- (B) The implementation date and the emission control strategy implemented for each engine in accordance with the requirements of subsection (e)(6)(D) and (e)(6)(C), respectively, for purposes of demonstrating compliance.
- (4) Reporting for Change of Annual Hours of Operation, Vessel Category/Use, Transfers of Vessels, Change of Ownership of Vessel or Engine, or Vessel Operation in Regulated California Waters.
 - (A) A person subject to this section must submit to the E.O. the information specified in subsection (g)(m)(1) through (g)(m)(6) within 30 days of a significant change of annual hours of operation (i.e., enough to change the engine's compliance date), vessel category/use, purchase, lease, rental, or change of ownership of the vessel or engine. In the case of a purchase, lease, rental, or change in ownership, the party in control or possession of the engine or vessel after the transaction is responsible for meeting the requirements of this paragraph;
 - (B) A person subject to this section must submit to the E.O. the information specified in subsection (g)(m)(1) through (g)(m)(6) within 30 days of the initial operation of a vessel brought into Regulated California Waters;
 - (C) Within 90 days of a significant change of annual hours of operation, vessel category/use, purchase, lease, rental, change of ownership, or initial operation of a vessel brought Regulated California Waters, or by the earliest applicable compliance date specified in subsection (e)(6)(D), whichever is later, a person subject to subsection (e)(6) shall submit a new Compliance Plan with the updated information pursuant to the Compliance Plan requirements specified in paragraph 2 above.

(n.1) Reporting Requirements (Applicable On and After January 1, 2023).

- (1) Annual Reporting of California Harbor Craft Fleet. Beginning January 1, 2023, a person subject to this subsection must submit the information specified in subsections (m)(1) through (m)(6) and applicable records required by (m)(14) through (m)(20) annually for all harbor craft vessels in his or her California fleet by March 31 of each year. For purposes of this subparagraph, "California fleet" means the total population of harbor craft that operate in Regulated California Waters for any amount of time under the person's direct control.
- (2) Reporting for Change of Annual Hours of Operation, Vessel Category/Use, Transfers of Vessels, Change of Homebase, Change of Hour Meter, Change of

Ownership of Vessel, Engine, or VDECS, or Vessel Operation in Regulated California Waters.

- (A) A person subject to this subsection must submit to the E.O. the information specified in subsection (m)(1) through (m)(6) and applicable records required by (m)(14) through (m)(20) within 30 days of a significant change of annual hours of operation (i.e., from low use hour to above low use limit), vessel category/use, change of hour meter, purchase, sell, lease, rental, or change of ownership of the vessel, engine, or VDECS. In the case of a purchase, sell, lease, rental, or change in ownership, both the party in control or possession of the engine or vessel before and after the transaction is responsible for meeting the requirements of this paragraph;
- (B) A person subject to this subsection must submit to the E.O. the information specified in subsection (m)(1) through (m)(6) and applicable (m)(14) through (m)(20) within 30 days of the initial operation of a vessel brought into Regulated California Waters;
- (C) A person subject to this subsection must submit to the E.O. the information specified in subsection (m)(1) through (m)(6) and applicable (m)(14) through (m)(20) within 30 days of transferring a vessel from a California facility to outside of California, or establishing a new facility within California.

(io) Violations.

- (1) A person who is subject to this section and commits a violation of any provision, standard, criteria, or requirement in this section is subject to the penalties, injunctive relief, and other remedies specified in H&S section 42400 et seq.; H&S section 42402 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.
- (2) Any failure to meet any provision, standard, criteria, or requirement in this section, including but not limited to the applicable emission limits; recordkeeping requirements; and ACEP provision, including the requirements of any approved ACEP plans, shall constitute a single, separate violation of this section for each ~~hour~~ part of a day that a person operates a vessel within the Regulated California Waters until such provision, standard, criteria, or requirement has been met.

- (3) A person who is subject to this section is liable for meeting the requirements of this section, notwithstanding any contractual arrangement that person may have with any third-parties.

(jp) *Methods to Demonstrate Compliance with Engine and Fuel Standards.*

- (1) Diesel PM, NO_x, NO, CO, HC, NMHC, and CO₂ testing must be done in accordance with the applicable method specified in the following procedures: International Organization for Standardization (ISO) 8178-2: 1996(E) ("ISO 8178 Part 2"); (2) ISO 8178-4: 1996(E) ("ISO 8178 Part 4"); and applicable methods and procedures specified in 40 CFR Part 94 (as amended in 2007), all of which are incorporated herein by reference, or 40 CFR Part 1042 for marine engines or in 40 CFR Part 89 or 40 CFR Part 1039 for nonroad (off-road) engines, as those Parts existed on April 27, 2010. Each of the procedures specified in this subsection is incorporated by reference herein.
- (2) The E.O. may approve in writing any alternative test method not specified in paragraph (1) above that the method's proponent has demonstrated to the E.O.'s satisfaction provides equivalent or better results to the methods in paragraph (1).

(kq) *Right of Entry.*

An agent or employee of the CARB has the right of entry to board any harbor craft for the purpose of inspecting propulsion and auxiliary engines, emission control strategies, fuel systems, and fuel storage; collecting fuel sample(s) not to exceed one liter per fuel tank; and acquiring and inspecting records required pursuant to this section.

(lr) *Severability.*

If any subsection, paragraph, subparagraph, sentence, clause, phrase, or portion of this regulation 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 regulation.

(ms) *Submittal of Documents (Applicable Until December 31, 2022).*

- (1) Prior to January 1, 2023, ^aAll documents required under this regulation must be submitted to the Executive Officer as follows:

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California Air Resources Board
~~Stationary Source~~ Transportation and Toxics Division
~~Emissions Assessment~~ Freight Activity Branch
~~Control Strategies~~ Freight Technology Section, Harbor Craft
P.O. Box 2815
Sacramento, California 95812-2815

- (2) Electronic submittals of information associated with compliance with this section may be approved by the E.O. upon request, provided such electronic submittals use digital signatures that meet the requirements specified in Government Code section 16.5. The E.O. may request the submittal of a hard copy of any electronic submittal.

(s.1) Submittal of Documents (Applicable On and After January 1, 2023).

- (1) Beginning January 1, 2023, all documents/reporting required under this regulation must be submitted to the E.O. electronically via a CARB reporting system implemented to assist with document submittals of this section, by e-mail to harborcraft@arb.ca.gov, or a hard copy to the E.O. as follows:

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

- (2) All information submitted to CARB shall be:
- (A) Written in the English language; and
- (B) True, accurate, and complete, signed under penalty of perjury by individual(s) with the authority to certify that the regulated party comply with applicable requirements of this regulation.

NOTE: Authority cited: Sections 39600, 39601, 39650, 39658, 39659, 39666, 41511, 43013, and 43018, Health and Safety Code. Reference: Sections 39650, 39658, 39659, 39666, 41510, 41511, 43013, and 43018, Health and Safety Code.