PROPOSED AMENDMENTS TO THE AIRBORNE TOXIC CONTROL MEASURE FOR DIESEL ENGINES ON COMMERCIAL HARBOR CRAFT OPERATED WITHIN CALIFORNIA WATERS AND 24 NAUTICAL MILES OF THE CALIFORNIA BASELINE

Amend section 93118.5, title 17, chapter 1, subchapter 7.5, California Code of Regulations (CCR). Proposed amendments are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions.

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

(a) *Purpose.*

The purpose of this section is to reduce diesel particulate matter (PM), oxides of sulfur (SOx), and oxides of nitrogen (NO_x) 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.

(b) *Applicability.*

(1) Except as provided in subsections (b) 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 any of the Regulated California Waters.

(2) *Engine Subject to Multiple ARB Regulations.* ~~The requirements of this section shall control i~~In the event an engine that is permanently affixed to ~~on~~ a harbor craft is subject to the requirements of this section, and either:

~~(A) of this section, and either~~

(A)~~(B)~~ the regulation for portable compression ignition (CI) engines and equipment (sections 93116-93116.5, title 17, California Code of Regulations (CCR)), or

(B~~C~~) the regulation for in-use off-road ~~CI~~ diesel vehicles ~~engines and equipment~~ (sections ~~2420-2427~~2449, 2449.1, 2449.2, and 2449.3, 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. ~~This provision shall apply only to each engine on the vessel that meets the above requirements and is permanently affixed to the vessel (i.e., 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).~~

(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, section 93118, 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 in their entirety for ocean-going tugboats and towboats. For purposes of this paragraph, "ocean-going tugboats and towboats" shall mean tugboats and towboats with a "registry" (foreign trade) endorsement on its United States (U.S.) Coast Guard certificate 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, a temporary replacement vessel is exempt only from the requirements set forth in subsection (e)(6) and only upon written approval by the ARB'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 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;

(3) 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 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, Table 9, and Table 10 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;

(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;

~~(7) The following engines are exempt from this section in its entirety:~~

~~(A) Notwithstanding section (b)(2), a vessel engine, including an engine on a barge, which is registered with ARB's Portable Engine Equipment Registration Program (PERP) (sections 2450 through 2465, title 13, CCR) before January 1, 2009 ;~~

~~(B) A vessel engine that is registered with PERP on or after January 1, 2009, and is not permanently affixed to the vessel (i.e., the engine, its fueling system, and its exhaust system are not welded or otherwise physically connected to the vessel or other vessel system, which permits the engine to be easily removed for use in a land-based application without modifications); and~~

~~(C) A vessel engine that is registered and permitted under local air district regulations before January 1, 2009;~~

(~~8~~7) A registered historic vessel is exempt only from subsection (e)(6);

(~~9~~8) A U.S. Coast Guard vessel is exempt from this section in its entirety;

(~~10~~9) A military tactical support vessel is exempt from this section in its entirety;

(~~11~~10) An engine rated less than 50 horsepower (hp) is exempt only from subsection (e)(6);

~~(12) An engine or vessel that is operated less than 300 hours per calendar year is exempt only from the requirements of subsection (e)(6); and~~

(1~~3~~1) *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.

(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) "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.

(3) "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.

(4) "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) 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) "Auxiliary Engine" means an engine designed primarily to provide power for uses other than propulsion.

(6) "Averaging" means an exchange of excess reduced regulated emissions among engines on vessels in the same owner's or operator's fleet.

(7) "Baseline" means the emissions level of a diesel engine using CARB diesel fuel as configured upon initial marine installation.

(8) "Barge" means a vessel having a flat-bottomed rectangular hull with sloping ends and built with or without a propulsion engine.

(9) "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.

(10) "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 (~~April 2005~~March 2007).

(11) "CARB" means the California Air Resources Board. CARB may also be referred to as "ARB."

(12) "Carbon Monoxide (CO)" is a colorless, odorless gas resulting from the incomplete combustion of hydrocarbon fuels.

(13) "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**.**

(14) "Category 2 engine" means any marine engine with a displacement of 5.0 to less than 30 liters per cylinder.

(15) "Category 3 engine" means any marine engine with a displacement of greater than 30 liters per cylinder.

(16) "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.

(17) "Certified nonroad engine" means an engine that is certified by U.S. EPA as meeting the requirements of title 40, Code of Federal Regulations (CFR), Part 89.

(1~~7~~8) "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.

(1~~8~~9) "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 ~~either~~ Table 7 ~~or~~ ,Table 8, Table 9, or Table 10 in subsection (e)(6)(D), whichever is applicable.

(~~19~~20) "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).

(2~~0~~1) "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.

(2~~1~~2) "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.

(2~~2~~3) "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.

(2~~3~~4)"Diesel-Fueled" means a diesel engine fueled in whole or part by diesel fuel.

(24~~5~~) "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.

(2~~5~~6) "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.

(2~~6~~7) "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.

(2~~7~~8) "Direct Control" means owning, operating, having a contract, lease, or other arrangement to operate a harbor craft.

(29) "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.

(~~28~~30) "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.

(~~29~~31) "Estuarine Waters" means an arm of the sea or ocean that extends inland to meet the mouth of a river.

(3~~0~~2) "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.

(3~~1~~3) "Executive Officer" means the Executive Officer (E.O.) of the California Air Resources Board or his/her designee.

(34) "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.

(3~~2~~5) "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.

(3~~3~~6) "Fishing Vessel" means a self-propelled vessel that is either:

(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.

(3~~4~~7) "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.

(3~~5~~8) "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.

(3~~6~~9) "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.

(~~37~~40) "Homeport" means the port in which a vessel is registered or permanently based.

(~~38~~41) "In-Use Harbor Craft" means a harbor craft that is not a new harbor craft.

(~~39~~42) "In-Use Marine Engine" means a marine engine that is not a new marine engine.

(~~40~~43) "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.

(~~41~~44) "Level" means, unless the context requires otherwise, one of three categories of ARB-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).

(~~42~~45) "Low-Use" means the operation of any compression-ignition engine associated with a harbor craft vessel for less than ~~300~~ the total annual hours of operation in Regulated California Waters, based on the immediately preceding calendar year, that deems it subject to the in-use engine requirements.

(~~43~~46) "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.

(~~44~~47) "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.

~~(45) "Multipurpose Harbor Craft" means a harbor craft that serves as a ferry, excursion vessel, tugboat, or towboat but is also used as a work, crew and supply, pilot, fishing, supply, or other vessel.~~

(~~46~~8) "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.

(~~47~~9) "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.

(~~48~~50) "Nitrogen Oxides or Oxides of Nitrogen (NO_x)" means compounds of nitric oxide (NO), nitrogen dioxide (NO_2), and other oxides of nitrogen, which are typically created during combustion processes and are major contributors to smog formation and acid deposition.

(~~49~~51) "Non-Methane Hydrocarbons (NMHC)" means the sum of all hydrocarbon (HC) air pollutants except methane.

(5~~0~~2) "Ocean-going Vessel" means a commercial, government, or military vessel meeting any one of the following criteria:

(A) a vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 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.

(5~~1~~3) "Operate" means steering or otherwise running the vessel or its functions while the vessel is underway, moored, anchored, or at dock.

(5~~2~~4) "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.

(5~~3~~5) "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).

(56) "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.

(5~~4~~7) "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.

(5~~5~~8) "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.

(5~~6~~9) "Port" means any facility used for water-borne commerce. "Port" includes, but is not limited to, facilities also known as "marine terminals" and "roadsteads."

(~~57~~60) "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.

(~~58~~61) "Portable ~~Engine~~ Equipment Registration Program (PERP)" means the statewide program designed to promote the use of clean portable engines in California, as provided 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.

(~~59~~62) "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.

(~~60~~63) "Propulsion Engine" means an engine that provides power to move a vessel through the water or directs the movement of a vessel.

(6~~1~~4) "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.

(6~~2~~5) "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."

(6~~3~~6) "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.

(6~~4~~7) "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).

(6~~5~~8) "Regulated California Waters" means all of the following:

(A) all California internal waters;
(B) all California estuarine waters;
(C) all California ports, roadsteads, and terminal facilities (collectively "ports");

(D) all waters within 3 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(E) all waters within 12 nautical miles of the California baseline, starting at the California-Oregon border and ending at the California-Mexico border at the Pacific Ocean, inclusive;

(F) all waters within 24 nautical miles of the California baseline, starting at the California-Oregon border to 34.43 degrees North, 121.12 degrees West; inclusive; and

(G) all waters within the area, not including any islands, between the California baseline and a line starting at 34.43 degrees North, 121.12 degrees West; thence to 33.50 degrees North, 118.58 degrees West; thence to 32.65 degrees North, 117.81 degrees West; and ending at the California-Mexico border at the Pacific Ocean, inclusive.

(69) "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).

(~~66~~70) "Rent" means payment for the use of harbor craft or diesel engine for a specified term.

(~~67~~71) "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.

(~~68~~72) "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.

(~~69~~73) "Supply Vessel" means a self-propelled vessel used for carrying supplies to and from off-shore and in-harbor locations including, but not limited to, off-shore work platforms, construction sites, and other vessels.

(74) "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.

(7~~0~~5) "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.

(7~~1~~6) "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.

(7~~2~~7) "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.

(7~~3~~8) "Temporary emergency rescue/recovery vessel" means a self-propelled vessel that performs duties including, but not limited to, policing harbor areas, fire fighting, survivor rescue, oil spill prevention, and on-water oil removal whose homeport is not within California and is brought into California for the immediate use of emergency rescue or recovery and returns to its homeport outside of California at the conclusion of its emergency rescue/recovery mission.

(7~~4~~9) "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.

(~~75~~80) "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~~+HC~~ (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.

(~~76~~81) "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

(~~77~~82) "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]	NOx + 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 NOx+HC in 2014.
(c) This standard level drops to 0.07 g/bhp-hr in 2018 for <600 kW engines.
(d) Tier 3 NOx+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]	NOx + 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 NOx+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]	NOx+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 / NOx+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.

(~~78~~83) "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.

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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]	NOx 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~~3~~4 [b,c,d]
1400 to <2000 kW	all	0.03	1.3	0.14	2016 [b,c]
600 to <1400 kW	all	0.03	1.3	0.14	2017

(a) 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
(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 / NOx+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) "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) and/or Title 40, CFR, Part 89.112(a). 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) and/or Title 40, CFR, Part 89.112(d).

(85) "Tier 4 Off-Road or Nonroad Emission Standards (final Tier 4 off-road standards)" means an engine subject to the final after-treatment-based Tier 4 emission standards in title 13, CCR, Section 2423(b)(1)(B) and/or Title 40, CFR, Part 1039.101. 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) and/or Title 40, CFR, Part 1039.101.

(86) "Tier 4 Off-Road or Nonroad Emission Standards (interim Tier 4 off-road 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) and/or Title 40, CFR, Part 1039.101. 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) and/or Title 40, CFR, Part 1039.101.

(~~79~~87) "Total Hydrocarbons (THC)" or "Hydrocarbons (HC)" means the total mass of open chain and cyclic hydrocarbon molecules.

(8~~0~~8) "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.

(8~~1~~9) "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.

(~~82~~90) "Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines (Verification Procedure)" means the ARB 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.

(~~83~~91) "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 NOx reductions.

(~~84~~92) "Vessel" or "Marine Vessel" means any tugboat, tanker, freighter, passenger ship, barge, or other boat, ship, or watercraft, except those used primarily for recreation.

(~~85~~93) "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).

(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.
- 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, and ~~multipurpose harbor craft~~ , 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 marine 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 marine 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.*

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
(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

if a person subject to this section is traveling from a non-California port at which none of the fuels listed in (e)(1)(A) through (E) are available, the diesel engines on the vessel may be fueled with either: U.S. EPA on-road diesel fuel meeting the specifications contained in 40 CFR §§ 80.500 et seq. or U.S. EPA nonroad diesel fuel (commencing June 1, 2010) meeting the specifications contained in 40 CFR 80.29 and 66 FR 5002 (1/18/01). Fuel records documenting the fuel purchase must be retained on-board the vessel for a minimum of one year.

(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.

(3) All In-Use Harbor Craft – Requirements for Newly Acquired Engines.

Beginning January 1, 2009, 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 be acquired for use as an auxiliary engine on harbor craft if the manufacturer has

complied with U.S. EPA § 1042.605 *(Dressing engines already certified to other standards for nonroad or heavy-duty highway engines for marine use*); 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 due to failure and a determination has been made, under the provisions of U.S EPA § 1042.615 engine replacement exemption, that no engine certified to the current standards is produced by any manufacturer with the appropriate physical or performance characteristics to repower the vessel then an alternate engine may be acquired for the replacement. Per U.S EPA § 1042.615, a separate determination, addressing every 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 1 standards started to apply and engines of that size are currently subject to Tier 3 standards, you must consider whether any Tier 1 or Tier 2 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, you must use it as the replacement engine. Documentation of these determinations must be supplied to the EO prior to engine replacement for review and approval.

(4) All New Harbor Craft (Including All New Ferries) – Requirements for Newly Acquired Vessels.

Beginning January 1, 2009, 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 of the diesel engines on the vessel meets the applicable Tier 2, Tier 3, or Tier 4 marine standards in effect on the date of vessel acquisition. Engines meeting the applicable Tier 3, interim Tier 4, or Final Tier 4 off-road standards in effect on the date of vessel acquisition may be acquired for use as an auxiliary engine if the manufacturer has complied with U.S. EPA § 1042.605 (*Dressing engines already certified to other standards for nonroad or heavy-duty highway engines for marine use).* The person must also meet the additional requirements set forth in

subsection (e)(5) below for diesel propulsion engines in newly acquired new ferries.

(5) Selected New Ferries Only – Additional Requirements for All Newly Acquired Propulsion Engines.

(A) Beginning January 1, 2009, a person subject to this section may not sell, purchase, offer for sale, import, or otherwise acquire a new ferry with the capacity to transport 75 or more passengers for use in any of the Regulated California Waters unless each propulsion diesel engine on the vessel:

1. meets either the Tier 2, ~~or~~ Tier 3 or Tier 4 marine standards that are in effect on the date of vessel acquisition; and

2. for any engine certified to either the Tier 2 or Tier 3 marine standards, will be operated only 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) In lieu of installing or using BACT pursuant to paragraph (A)2 above, the person may comply with paragraph (A)2 by installing on the new ferry a propulsion engine(s) that is certified to the Tier 4 standards if a Tier 4-certified engine is available at the time that the new ferry is delivered. If no Tier 4-certified engines are available at the time of ferry delivery, the person must meet the provisions of paragraphs (A)1 and (A)2.~~

~~(C)~~(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 NOx 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 NOx 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 ARB staff's best engineering judgment to determine if the proposed BACT provides the greatest feasible reduction of diesel PM or NOx; 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 ARB's internet site.

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

   A person subject to this provision must maintain operating records and other information in the manner and form specified by the E.O. in the BACT approval. The person must submit to ARB upon request all records and reports created pursuant to this provision, which must be maintained and retained for ARB 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 Marine Standards.

(A) *For Pre-Tier 1 and Tier-1 Certified Engines on Ferries, Excursion Vessels, Tugboats, Towboats, Push Boats, and ~~Multipurpose Harbor Craft~~ Crew and Supply Vessels, Dredges, and Barges Only.*

1. *Applicability*.

This subsection (e)(6) applies 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, ~~or multipurpose harbor craft~~, crew and supply vessel, dredge, or barge (in-use regulated category vessel) with a pre-Tier 1 or Tier-1 certified marine or off-road engine ~~for use~~ 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 dedge or barge categories

in ~~any of the~~ Regulated California Waters. This subsection applies to all such engines on all such vessels.

2. *General Requirement.*

After January 1, 2009, a person subject to this provision 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 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-~~certified~~ marine engine standards as set forth in this paragraph. The replacement engine must meet the U.S. EPA Tier 2 or Tier 3 marine 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). If the engine is an auxiliary engine, the replacement engine may be certified to Tier 2 or a higher off-road standards in effect on the date of acquisition that would apply to a new engine, of the same size and configuration as the in-use engine.

   [Note: For example, if the applicable compliance date is January 1, 2010, and the Tier 2 marine 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 standards. However, if the applicable compliance date is instead January 1, 2013, and the Tier 3 marine 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 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 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 engines or interim Tier 4 off-road engines may be used as the replacement engine to comply with this paragraph, even if Tier 4-certified marine and final Tier 4 off-road 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 that apply or would apply to new engines on the date the Tier 2 marine 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,
      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 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 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 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.

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 standards 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,
      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 standards even if Tier 4 marine 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 dredge or barge 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 operating in any of the regulated in-use vessel categories with the exception of the dedge or barge categories, or 80 or more hours per calendar year in either the dredge or barge categories.

(D) *Compliance Dates.*

Table 7, ~~and~~ Table 8, Table 9, and Table 10 below set forth the compliance dates by which a person must meet the requirements of subsection (e)(6)(A). Table 7 applies only to ~~vessels~~ engines on ferries, excursion vessels, tugboats, towboats, and push boats with a homeport outside of the SCAQMD; Table 8 applies only to ~~vessels~~ engines on ferries, excursion vessels, tugboats, towboats, and push boats with a homeport within the SCAQMD~~.~~ ; Table 9 applies only to engines on crew and supply vessels, and Table 10 applies to engines on barges and dredges. The compliance dates are set forth by engine model year and total annual hours of operation (for ~~all~~ use~~s~~ in any regulated in-use vessel category) of the vessel in Regulated California Waters. For Table 7, Table 9, and Table 10, Method D1, D2, or D3 below may be used for determining the actual or effective engine model year. For Table 8, 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 NOx,

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 NOx 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 ARB 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. 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. If the E.O. is thus satisfied, the effective model year of the Tier 1 rebuilt engine, for purposes of determining the compliance date in Table 7 ~~or~~, Table 8, Table 9, or Table 10, is the actual year in which the Tier 1 rebuild occurred.

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Table 7: Compliance Dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats ~~Vessels~~ 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: Compliance Dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats Vessels 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	~~13~~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: 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: 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	12/312022

(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 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. 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-~~certified~~ or Tier 3- <u>marine</u> 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 (ACE) 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 <u>or for each single engine in three or more vessels</u> with compliance dates of 2009 or

2010 for ferries, excursion vessels, tugboats, towboats, and push boats and 2011 or 2012 for crew and supply boats 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, 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 boats 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 boats 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 boats 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 boats 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.

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

(1) Requirements.

(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 NOx emissions or any increase in emissions greater than 10 percent for any other pollutant, relative to the emissions of diesel PM, NOx, and other pollutants that would have occurred under compliance with subsection (e).

(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.

(E) 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 or fuel additives;
5. shore-side power;
6. fleet averaging; and
7. any other measures that sufficiently reduce emissions.

(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 (e)(6)(C) and (e)(6)(D); 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) may include only those diesel PM and NO_x emissions from harbor craft with its homeport within a single specified California air district, 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) and (h);
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 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.

(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 subsection (e)(6)(C) and (e)(6)(D).

(2) Application Process.

(A) Applications for an ACE must be submitted in writing to the Executive Officer for evaluation <u>by February 28 of the first year that vessel engine compliance is required</u>.

(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 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 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 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, 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 ARB'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 15 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 ACEs.

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) ***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 homeport for the life of each engine subject to this section, including fleet swing engines. The owner or operator must provide such records for inspection to an agent or employee of ARB 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:

(1) Owner or Operator Contact Information:
- (A) Company name;
- (B) Contact name, phone and fax number, address, e-mail address;
- (C) Address where vessel is registered; and
- (D) Reporting year.

(2) Vessel information:
- (A) Harbor craft name;
- (B) 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);
- (C) Vessel homeport;
- (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.

(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);
- (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 operation, based upon readings of the non-resettable hour meters for previous calendar year per engine (for engines without an hour meter before 2009, provide an estimate);
- (C) Total hours of operation per calendar year in each of the regulated in-use vessel categories, based upon readings of the non-resettable hour meters for previous calendar year per engine;
- (~~C~~D) Estimated annual fuel usage per engine; and
- (~~D~~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; and
- (F) Date control equipment installed.

(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).

(8) 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) 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, 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).

(10) For each engine an owner or operator claims to have replaced for purposes of compliance with the requirements of (e)6, written documentation that the engine has been: dismantled, ~~or~~ destroyed, or sold out of state. 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 must be retained by the owner or operator for the entire engine life.

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

(13) All records specific to a BACT approved by the E.O. pursuant to subsection (e)(5).

(h) ***Initial and Compliance Plan Reporting Requirements.***

(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)(1) through (g)(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)(1) through (g)(6), and

(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, ~~or a~~ Change of Ownership of Vessel or Engine<u>, or Initial Form of Vessel Operation in Regulated California Waters.</u>

(A) A person subject to this section must submit to the E.O. the information specified in subsection (g)(1) through (g)(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) <u>A person subject to this section must submit to the E.O. the information specified in subsection (g)(1) through (g)(6) within 30 days of the initial operation of a vessel brought into Regulated California Waters;</u>

(~~B~~<u>C</u>)Within 90 days of a significant change of annual hours of operation, vessel category/use, purchase, lease, rental, ~~or~~ change of ownership, <u>or initial operation of a vessel brought Regulated California Waters</u>, 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.

(i) ***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 ACE provision, including the requirements of any approved ACE plans, shall constitute a single, separate violation of this section for each hour 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.

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

(1) Diesel PM, NO_x, NO, CO, HC, NMHC, and CO_2 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.

(2) The E.O. may approve in writing any alternative test method~~s~~ 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).

(k) ***Right of Entry.***

An agent or employee of the ARB 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.

(l) ***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.

(m) ***Submittal of Documents.***

(1) All documents required under this regulation must be submitted to the Executive Officer as follows:

California Air Resources Board
Stationary Source Division
Emissions Assessment Branch
Control Strategies 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.

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

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