

California Environmental Protection Agency



Air Resources Board

Final Statement of Reasons for Rulemaking

Including Summary of Comments and Agency Responses

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

Public Hearing Date: June 24, 2010
Agenda Item No.: 10-6-2

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State of California
AIR RESOURCES BOARD

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

Public Hearing Date: June 24, 2010
Agenda Item No.: **10-06-02**

I. GENERAL

The Staff Report: Initial Statement of Reasons for Proposed Rulemaking (“Staff Report”) entitled “Amendments to the Regulations to Reduce Emissions from Diesel Engines on Commercial Harbor Craft Operated Within California Waters and 24 Nautical Miles of the California Baseline,” released May 5, 2010, is incorporated by reference herein.

In this rulemaking, the Air Resources Board (ARB or Board) approved the adoption of amendments to title 17, California Code of Regulations (CCR) section 93118.5 (the Commercial Harbor Craft (CHC) Regulation), and to title 13, CCR section 2299.5. The amendments will further reduce emissions of diesel particulate matter (PM) and oxides of nitrogen (NOx) from diesel engines on commercial harbor craft operating within any of the Regulated California Waters. Regulated California Waters include all California inland waters, all California estuarine waters, and all waters within a zone 24 nautical miles seaward of the California coastline, except for specified areas along the Southern California coastline

On May 5, 2010, ARB published a notice for a June 24, 2010 public hearing to consider the proposed regulatory action. The Staff Report was also made available for public review and comment beginning May 5, 2010. The Staff Report provides the rationale for the proposed amendments and incorporated certification and test procedures. The text of the proposed regulatory amendments to title 13, California Code of Regulations (CCR) section 2299.5, and title 17, CCR section 93118.5 and the incorporated certification and test procedures were included as Appendices to the Staff Report. These documents were also posted on the ARB’s Internet website for the rulemaking at <http://www.arb.ca.gov/regact/2010/chc10/chc10.htm>.

On June 24, 2010, the Board conducted a public hearing and received oral and written comments. At the conclusion of the hearing, the Board adopted Resolution 10-26, in which it approved the originally proposed amendments along with several modifications.

Some of the modifications had been suggested by staff in a document and incorporated herein entitled “Staff’s Suggested Modifications to the Original Proposal” that was distributed at the hearing and that was Attachment B to the Resolution. Resolution 10-26 and Attachment B are available at ARB’s Internet web page for this rulemaking: <http://www.arb.ca.gov/regact/2010/chc10/chc10.htm>.

In accordance with section 11346.8 of the Government Code, Resolution 10-26 directed the Executive Officer to adopt the proposed amendments to title 13, CCR section 2299.5 and to title 17, CCR section 93118.5, along with such other conforming modifications as may be appropriate, and to make the modified text available for a supplemental comment period of at least 15 days. The Executive Officer was then directed either to adopt the amendments with such additional modifications as may be appropriate in light of the comments received, or to present the regulations to the Board for further consideration if warranted in light of the comments.

The text of all the proposed modifications to title 13, CCR section 2299.5 and to title 17, CCR section 93118.5 was made available for a supplemental 15-day comment period by issuance of a “Notice of Public Availability of Modified Text.” This Notice was distributed on October 1, 2010, to each of the individuals described in subsections (a)(1) through (a)(4) of section 44, title 1, CCR, and to other stakeholders, interested parties, and to other persons generally interested in ARB’s rulemaking requirements applicable to diesel engines operated on commercial harbor craft within Regulated California Waters. The “Notice of Public Availability of Modified Text” listed the ARB Internet site from which interested parties could obtain the complete text of the regulations and the incorporated documents that would be affected by the modifications to the original proposal, with all of the modifications clearly indicated. These documents were also published on ARB’s Internet web page for this rulemaking <http://www.arb.ca.gov/regact/2010/chc10/chc10.htm> on October 1, 2010. No written comments were received during this 15-day comment period.

After considering the comments received during the 15-day comment period, the Executive Officer issued Executive Order R-11-002, adopting the amendments to title 13, CCR section 2299.5 and to title 17, CCR section 93118.5 and the incorporated documents.

This Final Statement of Reasons (FSOR) updates the Staff Report by identifying and providing the rationale for the modifications made to the originally proposed regulatory text, including non-substantial modifications and clarifications made after the close of the 15-day comment period. This FSOR also contains a summary of the comments received by the Board on the proposed amendments and the modifications and ARB’s responses to those comments.

Documents Incorporated by Reference. The amendments approved by the Board and suggested by staff incorporate by reference the following documents:

(1) the National Oceanic and Atmospheric Administration (NOAA) Nautical Chart, as authored by the NOAA Office of Coast Survey, Chart 18740, San Diego to Santa Rosa Island (March 2007);

(2) the “Family Emission Limit” (FEL) as set forth in title 13, California Code of Regulations section 2423, or title 40, Code of Federal Regulations Part 89.112(d) or title 40, CFR Part 1039.101, as they existed on April 27, 2010;

(3) the Tier 2 new engine emission standards as set forth in title 13, CCR, section 2423(b)(1)(A) or title 40, CFR, Part 89.112(a) as they existed on April 27, 2010, and the Tier 2 FEL in title 13, CCR, 2423(b)(2)(A) or title 40, CFR, Part 89.112(d), as they existed on April 27, 2010;

(4) the Tier 3 new engine emission standards as set forth in title 13, CCR, section 2423(b)(1)(A) or title 40, CFR, Part 89.112(a), as they existed on April 27, 2010, and the Tier 3 FEL in title 13, CCR, 2423(b)(2)(A) or title 40, CFR, Part 89.112(d), as they existed on April 27, 2010;

(5) the final after-treatment-based Tier 4 emission standards as set forth in title 13, CCR, section 2423(b)(1)(B) or title 40, CFR, Part 1039.101, as they existed on April 27, 2010, and the Tier 4 FEL in title 13, CCR, 2423(b)(2)(B) or title 40, CFR, Part 1039.101, as they existed on April 27, 2010; and

(6) the interim Tier 4 emission standards as set forth in title 13, CCR, section 2423(b)(1)(B) or title 40, CFR, Part 1039.101, as they existed on April 27, 2010, and the Tier 4 FEL in title 13, CCR, 2423(b)(2)(B) or title 40, CFR, Part 1039.101, as they existed on April 27, 2010; and

(7) the methods and procedures set forth in title 40, CFR, Parts 89 and 1039, as they existed on April 27, 2010.

These documents consist of an updated nautical chart defining sections of the California baseline (i.e., the coastline), and emission standards and related procedures for new off-road and nonroad engines promulgated by ARB and U.S. EPA. Each instance of incorporation identifies the incorporated document by title and date. The documents are readily available from ARB upon request and were made available in the context of this rulemaking in the manner specified in Government Code section 11346.5(b). The referenced nautical chart is available from NOAA, a prominent and long-established national agency. Also, the U.S. EPA regulations are readily available from that agency. Therefore, all of the incorporated documents are reasonably available to the affected public from commonly known sources.

The documents are incorporated by reference because it would be cumbersome, unduly expensive, and otherwise impractical to print them in the CCR. Existing ARB administrative practice has been to have specifications, test procedures, and similar documents incorporated by reference rather than printed in the CCR because these specifications and procedures are highly technical and complex. These include “nuts and bolts” engineering protocols and laboratory practices and have a very limited audience. Because ARB has never printed complete test procedures and similar documents in the CCR, the directly affected public is accustomed to the incorporation format utilized in the regulation. These test procedures and similar documents as a whole are extensive, and it would be both cumbersome and expensive to print these lengthy and technically complex procedures in the CCR for a limited audience. Printing portions of the test procedures and other documents that are incorporated by reference would be unnecessarily confusing to the affected public. For similar reasons, ARB is also incorporating by reference the detailed NOAA nautical charts specified above.

Fiscal Impacts. Pursuant to Government Code sections 11346.5(a)(5) and 11346.5(a)(6), the Executive Officer has determined that the regulatory action will create costs to some State and local agencies. The California Department of Parks and Recreation operates two crew and supply vessels used to service Angel Island in the San Francisco Bay Area and would be impacted by the in-use engine requirements. The one-time regulatory cost to this state agency is estimated to be about \$60,000 in 2014. Barge and dredge vessels are owned and operated by two local agencies in Santa Cruz and Monterey and by a federal agency, the United States Army Corps of Engineers. The estimated regulatory costs range from \$1,900 to \$46,000 over the life of the regulation for these agencies that operate barge and dredge vessels. The estimated new equipment costs range from \$24,700 to \$393,000. These costs will be incurred between 2014 and 2016. Staff estimates these costs would not have a significant impact on these public agencies. However, this regulatory action will not result in costs or savings, as defined in Government Code section 11346.5(a)(5) and 11346.5(a)(6), to any state agency, or in federal funding to the state, or create costs or mandates to any local agency or school district, whether or not reimbursable by the state pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, or other non-discretionary costs or savings to local agencies in the current or next two fiscal years (fiscal year 2010/2011 through fiscal year 2012/2013).

The Executive Officer has determined that there will be costs to the ARB to implement and enforce the proposed amendments. ARB may need an additional staff person beginning in fiscal year 2011/2012 to enforce the proposed amendments, at a cost of \$175,000 and \$12,000 for yearly travel. The ARB’s administrative costs for outreach, educational efforts, and technical assistance would be absorbed within existing budgets and resources.

Consideration of Alternatives. Staff considered two alternatives to the proposed amendments, including: (1) subjecting barges and dredge vessels to an accelerated compliance schedule (2011 through 2020), but retaining the proposed compliance schedule for crew and supply vessels (2011 through 2022), and (2) decelerating the

statewide compliance schedule for both crew and supply and barge and dredge vessels (2011 through 2022).

For the reasons set forth in the Staff Report, in staff's comments and responses at the hearing and in this FSOR, the Board has determined that no alternative considered by the agency or brought to the attention of the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board.

II. MODIFICATIONS TO THE ORIGINAL PROPOSAL

As previously discussed, at the June 24, 2010 public hearing the Board adopted the proposed regulatory amendments with modifications. Subsequent to the hearing, staff proposed modifications to the regulatory text that would provide CHC owners or operators additional compliance flexibility by allowing them to also use currently available ARB or U.S. EPA Tier 2 or higher certified off-road engines to meet the in-use requirements for *propulsion engines* if the engine or vessel manufacturer has complied with 40 CFR 1042.605, which sets requirements for marinized land-based engines. Staff also proposed modifications to allow owners or operators of new commercial harbor craft vessels to use ARB or U.S. EPA Tier 2 or higher certified off-road engines or engines certified to meet Tier 2 or higher U.S. EPA marine engine standards to meet the requirements for propulsion engines, and further proposed modifications to clarify the requirements of the regulation. These modifications were explained in detail in the Notice of Public Availability of Modified Text that was issued for a 15-day public comment period that began on October 1, 2010, and ended on October 18, 2010. The most significant modifications and clarifications to the regulation considered by the Board at its June 24, 2010 public hearing are summarized below:

A. Modifications to Title 17, California Code of Regulations Section 93118.5

1. Allow the Use of ARB or U.S. EPA Certified Off-Road (Nonroad) Engines to Comply with the In-use Standard Requirements for Propulsion Engines

The CHC regulation currently provides that new or in-use diesel propulsion or auxiliary engines for in-use harbor craft may not be sold, offered for sale, leased, rented, or acquired unless those engines are certified to at least federal Tier 2 or Tier 3 marine emission standards for a new engine of the same power rating and displacement in effect at the time, depending on the specified compliance dates. The proposed amendments would allow CHC owners or operators to comply with these requirements by using currently available ARB or U.S. EPA Tier 2 or higher certified off-road engines to meet the in-use requirements for *auxiliary engines*.

Staff further proposed modifications that would allow CHC owners or operators to use currently available ARB or U.S. EPA Tier 2 or higher certified off-road engines to meet the in-use requirements for *propulsion engines* if the engine or vessel manufacturer complied

with 40 CFR 1042.605, which sets requirements for marinized land-based engines. Staff accordingly proposed modifications to title 17 CCR sections 93118.5(e)(3)(A), (e)(6)(A), and (e)(6)(C)1-3.

2. Allow the Use of ARB or U.S. EPA Certified Off-Road (Nonroad) Propulsion Engines to Comply with the Requirements for New Harbor Craft [title 17 CCR Section 93118.5(e)(4)]

Currently, the CHC regulation requires that newly acquired harbor craft vessels use propulsion engines certified to meet U.S. EPA's marine engine standards. Staff proposed an amendment to also allow the use of ARB or U.S. EPA certified off-road engines to comply with the requirements in section 93118.5(e)(4) for newly acquired vessels. This amendment will provide owners or operators of new commercial harbor craft vessels additional compliance flexibility by allowing them to use either ARB or U.S. EPA Tier 2 or higher certified off-road engines or engines certified to meet Tier 2 or higher U.S. EPA marine engine standards to meet the requirements for propulsion engines.

3. Other Minor Changes

Section 93118.5(d)(17) was modified to clarify that "certified nonroad engine" includes nonroad engines certified by U.S. EPA as meeting the requirements applicable to both new and in-use compression ignition engines both before and after the 2014 model year.

Section 93118.5(d)(62) was modified to clarify that the definition of "Pre-Tier 1 Engine" also includes an engine built before the effective date of U.S. EPA's Tier 1 emission standards for nonroad compression ignition engines as set forth in 40 CFR Part 89.

New section 93118.5(d)(84) was added to include a definition for the term "Tier 1 Off-Road or Nonroad Emission Standards."

Section 93118.5(d)(87) was modified to substitute "Final Tier 4 Off-Road or Nonroad Emission Standards" for "Tier 4 Off-Road or Nonroad Emission Standards (final Tier 4 off-road standards)," to improve clarity.

Section 93118.5(d)(88) was modified to substitute "Interim Tier 4 Off-Road or Nonroad Emission Standards" for "Tier 4 Off-Road or Nonroad Emission Standards (interim Tier 4 off-road standards)" to improve clarity.

Section 93118.5(e)(6)(E)2 was modified to clarify that an extension is also available if an applicant demonstrates there is no suitable Tier 2 or Tier 3 certified off-road replacement engine available anywhere that can be used in the applicant's specific vessel.

Staff also made minor, non-substantive modifications throughout the regulation to provide additional clarity. Other non-substantive changes include correcting formatting and grammatical errors, and minor administrative changes and corrections.

III. MODIFICATIONS MADE SUBSEQUENT TO THE 15-DAY PUBLIC COMMENT PERIOD

Subsequent to the 15-day public comment period, staff discovered that it advertently failed to expressly indicate modifications to the titles of certain tables in the proposed amendments to title 17, CCR section 93118.5. Staff has therefore modified title 17, CCR section 93118.5 to correct these oversights.

A. Indicate Modifications to the Titles of Tables 7, 8, 9, and 10 in Section 93118.5(e)(6)(D)3.

1. Staff should have indicated the addition of the following underlined text to the title of Table 7 in section 93118.5(e)(6)(D)3: “Compliance dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats ~~Vessels~~ with Homeports Outside SCAQMD.”

2. Staff should have indicated the addition of the following underlined text to the title of Table 8 in section 93118.5(e)(6)(D)3: “Compliance dates for Engines on Ferries, Excursion Vessels, Tugboats, Towboats, and Push Boats ~~Vessels~~ with Homeports Outside SCAQMD.”

3. Staff should have indicated the addition of the following underlined text to the title of Table 9, “Compliance Dates for Engines on Crew and Supply Vessels Statewide.”

4. Staff should have indicated the addition of the following underlined text to the title of Table 10, “Compliance Dates for pre-Tier 1 and Tier 1 Engines on Dredge and Barge Vessels Statewide.”

B. Indicate Modifications to Text of Section 93118.5(e)(3)(C)

1. Staff should have indicated the addition of the following underlined text to subsection (c) of section 93118.5(e)(3)(C): (C).

The above-referenced text (as indicated in underline format in this document) was present in both Appendix A to the Notice of Public Hearing to Consider Amendments to the Regulations to Reduce Emissions from Diesel Engines on Commercial Harbor Craft Operated Within California Waters and 24 Nautical Miles of the California Baseline, and in the Notice of Public Availability of Modified Text, issued on October 1, 2010, but was not indicated as an addition to the existing regulatory text.

Each of these modifications constitutes a nonsubstantial change to the regulatory text because each modification clarifies the requirements or conditions as set forth in the original text (or in the original text as modified in the Notice of Public Availability of Modified Text) and does not materially alter those requirements or conditions.

IV. SUMMARY OF COMMENTS AND AGENCY RESPONSE

The ARB received written comments during the 45-day comment period in response to the May 5, 2010 public hearing notice. No written comments were received during the 15-day comment period in response to the notice of proposed modified text made available for comment on October 1, 2010. Listed below are persons and organizations that submitted comments.

Following the list is a summary of each objection or recommendation made regarding the proposed action, together with an explanation of how the proposed action has been changed to accommodate the objection or recommendation, or the reasons for making no change. The comments have been grouped by topic. Comments not involving objections or recommendations specifically directed towards the rulemaking or to the procedures followed by ARB in this rulemaking are not summarized below.

The following organizations and individual public citizens submitted comments in support of the proposed amendments:

- Ventura County Air Pollution Control District
- South Coast Air Quality Management District
- Santa Barbara County Air Pollution Control District
- American Lung Association in California
- Bay Area Clean Air Task Force
- Breathe California
- Friends of the Earth
- Natural Resources Defense Council
- Sierra Club
- Union of Concerned Scientists

Comments in support of the proposed regulatory actions are not summarized below, unless they are relevant to another comment or response. The comments by South Coast Air Quality Management District supported the regulation with some recommendations and so are included below.

The comments are organized by subject.

Table I
Comments Received during the 45-day Comment Period
(Excluding Statements in Support of the CHC Regulation)

Reference	Commenter
AMC	Megan Shahnazarian American Marine Corporation Written testimony: May 27, 2010
HALPIN	Bill Halpin Written testimony: May 24, 2010
HORNBLOWER	Charlie Bills (signed letter) Corporate Vice President Marine Operations & Engineering Hornblower Cruises and Events Written testimony: May 12, 2010
SOUTH COAST	Berry Wallerstein Executive Officer South Coast Air Quality Management District Written testimony: June 22, 2010
R.E. STAITE	Chad Carpenter R.E. Staite Engineering, Inc. Written testimony: June 23, 2010

A. Definitions

1. **Comment:** “We propose the development of a ‘classic vessel’ definition akin to the ‘registered historic vessel’ definition, but not requiring listing in the National Register of Historic Places. A classic vessel would be exempt from subsection (e)(6) if it can be shown that it has some historical significance that separates it from other vessels, but perhaps not to the degree that it qualifies as a registered historic vessel. As you know, we have a number of unique, typically wooden-hulled vessels with extensive architectural details and quality construction. Many have a unique association with historic and culturally significant events and persons. In many of these older vessels, the engines act as a portion of the ship’s ballast and stability and extensive demolition would be required to replace these engines, which then jeopardizes the original integrity of the vessel. Consistent with the current regulations, we propose that information to qualify as a classic vessel would have to be submitted to the California Air Resources Board Executive Officer for approval.” (HORNBLLOWER)

Agency Response: No change was made in response to this comment. This comment is not specifically directed at the proposed amendments or to the certification procedures or test procedures incorporated by reference therein. Specifically, this comment requests the creation of a new exemption from the CHC regulation for the above-described “classic vessels” that extends beyond the scope of this rulemaking action.

Additionally, ARB considered and responded to this same comment in the 2007 rulemaking action establishing the original CHC regulation. Please see the 2007 Final Statement of Reasons “Public Hearing to Consider the Adoption of Regulations to Reduce Emissions from Diesel Engines on Commercial Harbor Craft Operated within California Waters and 24 Nautical Miles of the California Baseline”, Chapter III, section D-3. <http://www.arb.ca.gov/regact/2007/chc07/chcfsor.pdf>

B. Economic Assistance Program

1. **Comment:** “We propose a review of the Carl Moyer program in concert with the Harbor Craft Regulations to allow greater flexibility and additional applications for older vessel engines that are not high fuel burners, but are nearing the end of their useful life. Excursion vessels do not necessarily compete well for Moyer funds because of their generally low annual hours and fuel consumption. Additionally, it is our understanding that if an engine is within three years of the end of its useful life, Moyer funding is not available. These issues combine to restrict our application and potential to use Moyer funds during a time when we could desperately use the funding assistance. A possible solution is to eliminate the three year minimum project life requirement and earmark funds for vessels with particular duty cycles (low hour, low fuel burn and Tier 0 engines).” (HORNBLLOWER)

Agency Response: No change was made in response to this comment. This comment is not specifically directed at the proposed amendments or to the certification procedures or test procedures incorporated by reference therein, but is instead directed at proposed modifications to another ARB program and therefore extends beyond the scope of this rulemaking action.

In addition, the suggested changes to the Carl Moyer program would generally require action by the legislature, since the authorizing statutes require that all grants be both surplus reductions to all regulations and also meet certain cost effectiveness requirements. Although the Carl Moyer program is presently undergoing a review and “retooling” process which will culminate with an ARB Board hearing in early 2011, it is not expected that the changes could be made within the scope of the authorizing statutes that would significantly alter the funding eligibility of these vessels.

C. Regulatory Economic Analysis

- 1. Comment:** “From our perspective, one of the larger flaws in the legislative analysis was the economic portion of the staff report. Staff argued that the increased costs to the vessel owners could be simply passed on to their customers. In today’s climate, there are no customers! Relative to a few years ago, the number of customers has substantially decreased, and with it our dining yacht revenues. To pass on increased costs as a result of mandated emissions regulations is a significant economic burden in this economy. Our view is that the legislation should be amended to postpone or delay implementation until the economy improves and our customers return.” (HORNBLOWER)

Agency Response: No change was made in response to this comment. Staff disagrees that the amendments will impose significant economic burdens on affected CHC vessel owners. Rather, staff estimates that the amendments would decrease the average return on owner’s equity (ROE) for crew and supply, and for barge and dredge vessels by 0.95 percent. Overall, most affected businesses will be able to absorb the costs of the amendments with no significant adverse impacts on their profitability. However, these businesses are unlikely to have to absorb the entire cost of the amended regulation. To the extent that they are able to pass on the cost of the amended regulation, the impact on their profitability should be less than estimated here. See Staff Report, Section 6.B, and Appendix D. Staff also anticipates that the recent economic recession has not significantly reduced the emissions from affected CHC vessels because crew and supply vessels primarily service oil platforms which have continued production despite the economic downturn, and because barge and dredge operations are essential in nature and have also continued production throughout the recession.

Furthermore, delaying the implementation of the amendments would directly and substantially impair the projected emission reductions of diesel particulate matter (PM) and oxides of nitrogen (NOx) from affected CHC vessels. As explained in

Section 5.A of the Staff Report, these emission reductions are estimated to be 277 tons of PM and 3,475 tons of NOx cumulative reductions from 2011 to 2025.

D. CHC Regulation Implementation

- 1. Comment:** American Marine Corporation (AMC) has submitted an application for Carl Moyer funding to the South Coast Air Quality Management District (SCAQMD) for four vessels, three of which are crew vessels (1982 model years). SCAQMD staff previously informed AMC that these vessels were eligible for funding because crew vessels were not regulated by the existing CHC regulation.

However, if the proposed amendments become effective, AMC will not be eligible for Carl Moyer funds for these vessels. AMC's best chance for funding is if SCAQMD can expedite its application for Moyer funding (before the proposed amendments take effect.)

"Please consider my plea to potentially alter the compliance dates so that we have at least 3 years to comply and thus can show three years surplus to Carl Moyer or to finalize the current Carl Moyer/AQMD [South Coast Air Quality Management District] contracts before passing the amendment".
(AMC)

Agency Response: No change was made in response to this comment. The CHC regulation's compliance schedule requires that the oldest and highest-use engines in the harbor craft inventory comply first. Consequently, it is these oldest, dirtiest engines that are required to comply in the first three years of the CHC regulation's schedule. These early year reductions are especially needed in the South Coast Air Basin, which is in non-attainment for the federal annual PM2.5 and PM10 ambient air quality standards and 8-hour ozone standard.

The Carl Moyer Program plays a complementary role to California's regulatory program by funding emission reductions that are surplus, i.e., early and/or in excess of what is required by regulation. Applications for funding the replacement of engines on crew and supply vessels, could have been approved prior to the June 2010 Board Hearing. However, once the Board approved the CHC regulatory amendments, including a timeline for in-use engines on crew and supply vessels, reductions achieved by replacing crew vessel engines that would be required to comply in the next three years are no longer surplus emission reductions. The South Coast Air Quality Management District cannot approve replacement of these engines under the Carl Moyer Program.

- 2. Comment:** "We recognize the difficulty in forecasting a significantly improved economy. At the same time, we feel it is entirely reasonable to consider that it will take several years for the economy to recover. Therefore, if implementation of the regulations cannot be postponed or delayed, we suggest extending all compliance deadlines by five years. This would remove the immediate economic hardship, but continue to move forward on these

emission reduction regulations. Changes could easily be made to Tables 7 and 8, and perhaps they could even be combined and streamlined at this point.” (HORNBLOWER)

Agency Response: No change was made in response to this comment. The commenter suggests extending the compliance dates in existing tables 7 and 8 [of title 17, California Code of Regulations 93118.5(e)(6)(D)3], which specifically sets forth compliance dates for in-use ferries, excursion vessels, tugboats, and towboats. As such, the comment does not raise any objections or recommendation directed to the proposed amendments and therefore extends beyond the scope of this rulemaking action.

The current CHC regulation places the responsibility on CHC owners and operators to strategically schedule the replacement of engines with available extensions and with early replacements as needed to spread the work out over a time period that is best suited to their particular operational and financing circumstances.

3. Comment: “Without an across-the-board extension of the compliance deadlines, another proposal would be to increase the one-time compliance extension dates by five years. As an example, rather than an extension to 12/31/2013 for engines with a compliance date of 2009 or 2010, allow the extension to 12/31/2018 to allow more time for multiple engines and vessels to come into compliance. Another option would be to permit time extensions in any year where a vessel owner has to address engines on multiple vessels. In our fleet, we have several compliance years where multiple vessels/engines will need to come into conformity with the regulations.” (HORNBLOWER)

Agency Response: No changes were made in response to this comment. The commenter suggested an increase of five years to the one-time compliance extension dates for multiple engines on multiple vessels with the same compliance dates, or to allow time extensions in such situations. The current CHC regulation, section 93118.5(e)(6)(E)4.b, already includes provisions by which the Executive Officer may grant a vessel owner or operator a compliance extension beyond the specified deadline of the CHC regulation. For example, multiple vessels with engines requiring compliance within the same calendar year may be granted extensions for up to one year. If the owner of multiple vessels has a compliance date of 2013, the owner has had 4 years, since the CHC regulation requirements took effect in 2009, to upgrade vessel engines prior to the compliance date. Therefore, the CHC regulation extension provision provides one year additional flexibility to have all the owners’ vessel engines in compliance with the CHC regulation emission requirements.

4. **Comment:** “There is a service boat that takes workers to the oil islands from the Seal Beach pier daily.

The boat that transports workers and equipment to the oil platform, usually the “Capt T Li” exudes an inordinate amount of diesel smoke and I was told that starting in 2009 there were restrictions going into force that would require more efficient engines.

The noxious fumes are “re-directed” by a consistent breeze that pushes the fumes on shore. The boat takes on passengers from the pier about 500 feet from the sand and the homes and the people on the beach.

The situation is exacerbated by the fact that the boat(s) do not tie-off on the pier and idle while loading. They continue to run the engines to control their position which is in the surf line and therefore requires quite a bit of acceleration to keep the boat close to the pier. The racing engine, of course, belches more fumes than an idling engine would. It is not a quick stop and go arrangement. The boat goes back and forth for anywhere from 5 minutes to as much as one half hour.”

(HALPIN)

Agency Response: No change was made in response to this comment. The vessel you described appears to be a crew boat. The proposed amendments subject diesel-fueled engines on crew and supply vessels to in-use emission limits, requiring owners and operators of new and in-use crew and supply vessels to meet cleaner engine emission standards. Specifically, the amendments to the CHC regulation will reduce emissions from these vessel engines by 60 -70 percent or greater. Under the proposed amendments to the CHC regulation, crew vessels, such as the vessel visiting Seal Beach pier, will be required to have engines that meet the current U.S. EPA marine engine or off-road emission standards. Based on the age of the engines in this vessel and the CHC regulatory compliance schedule, the engines on this crew boat will be required to meet lower emission standards by 2012.

E. Low-Use Engine Hours

1. **Comment:** “We suggest increasing the current Compliance Method C4 criteria from 300 hours to 600 hours annually. In our view, the 300 hour operating floor is without justification and staff should consider an increase, particularly for dinner excursion vessels that have vastly different engine duty cycles than ferry vessels. A year in the life of a dinner vessel is not the same as a year in the life of a ferry. Our vessels rarely travel above 6 knots and burn very little fuel. A vessel that makes 800 trips a year at this speed will burn substantially less fuel than a ferry or other vessel making 300 trips a year at 20 knots. If an across-the-board increase is not viable, staff should consider raising the floor to 600 hours for vessels of a certain age. Past experience during better economic times has shown that our older, classic vessels (40-50 years old) have typically operated on average just under 400

hours annually on the main propulsion engines and just under 600 hours annually on the auxiliary engines. A 600-hour annual operating floor would preserve a limited range of unique vessels in California waters without jeopardizing air quality.”
(HORNBLOWER)

Agency Response: No change was made in response to this comment. The commenter’s request to modify Compliance Method C4, which requires a demonstration that an engine has not and will not operate over a set number of hours annually, is not directed at a provision affected by the proposed amendments and therefore extends beyond the scope of this regulatory action. (See title 17 CCR section 93118.5(e)(6)(C)4). However, it should be noted that ARB chose the 300 hour low-use exemption limit to minimize the emission reductions from the exemption, while still exempting those engines that would be least cost effective to bring into compliance. The required emission reduction goals would not be met if the exemption were doubled and increased to 600 hours per year.

2. **Comment:** ARB should “keep the low-use hours of operation for Barge vessels [engines] the same as the current regulation for Tugboats and Towboats at 300 hours.”

“...Tugs and Barges often work the same hours under the same environment and work conditions, so it is within reason to keep low-usage hours for both vessels at 300 hrs per year.

Second, due to low usage and high maintenance cost to maintain a barge, it makes these units cost prohibitive for a small business to own and run if we are required to restrict our usage of essential auxiliary equipment to 80 hrs per year. Third, the burden of replacing an engine(s) at a cost of [*sic*] \$30k to 40k each due to exceeding the cost of usage is also burdensome due to the depressed marine construction market. Further, we may not be able to support an upgrade due to lack of business thusly restricting our access to the market because we are timed out.

Engines dedicated to performing barge work such as an anchor winch, spud winch or other dedicated auxiliary engines will have a low-use threshold that equates to 1.5 hours per week as now proposed. Barge auxiliary engines should be treated with the same number of low-use hours as similar auxiliary engines on Tugboats which is 5.7 hours per week.”
(R.E. Staite)

Agency Response: No change was made in response to this comment. Historically, before the original CHC regulation was adopted, most barge vessel engines were regulated under the Portable Engine Airborne Toxic Control Measure (ATCM) or under local air pollution control district permitting requirements. Under the current CHC regulation, barge vessel engines are subject to either the Portable Engine ATCM, (which provides barge and dredge vessel engines a low-use exemption of 80 hours per year), district permitting requirements, or the CHC

regulation. The proposed amendments pertaining to barge and dredge vessel engines will align the Portable Engine ATCM and the current CHC regulation to subject barge and dredge vessel engines to only one set of requirements, and staff therefore incorporated the existing 80 hour annual low-use exemption from the Portable Engine ATCM into the proposed amendments. Increasing this limit, as proposed by the commenter, would likely result in increased emissions from this category of CHC vessel engines, which is contrary to the intent of the amendments. In addition, many barge and dredge vessel owners have already upgraded their engines to meet the current engine emission standards on engines operating more than 80 annual hours, preparing for the fleet average emission requirements of the Portable Engine ATCM.

F. Alternative Control of Emissions

- 1. Comment:** “For owners who have already repowered or hybridized vessels within California, the Board should give additional credit for fleet averaging to help mitigate the effects of this unfavorable economy. Rather than a simple one-for-one fleet averaging, we propose a two-for-one policy, whereby credits are doubled for those operators who have taken the initiative and chosen to repower or hybridize their vessels during these tough economic times.”
(HORNBLOWER)

Agency Response: No change was made in response to this comment. The proposed amendments do not incorporate any emission credit or “averaging” provision for vessels, and therefore this comment does not raise any objections or recommendation specifically directed at the proposed amendments, and therefore extends beyond the scope of this rulemaking action. That being said, ARB adopted the CHC regulation to protect the health, welfare, and safety of California’s citizens and environment, and the CHC regulation is authorized and mandated under State law. Each CHC engine stands on its own, and is subject to the replacement schedule. Old, dirty engines need to be retired and replaced with new cleaner engines to meet the public health goals. The goal of California’s Diesel Risk Reduction Program is to “significantly reduce diesel PM emissions and the associated potential cancer risk, decrease noncancer health affects (such as asthma and bronchitis), and improve visibility.”

The current CHC regulation includes an Alternative Control of Emissions (ACE) option for owner/operators of harbor craft that would allow them to demonstrate that equivalent emission reductions would be achieved, or exceeded, using alternative strategies. Alternative strategies can include engine modifications, exhaust after-treatment control, engine repower, using alternative fuels or fuel additives, or fleet averaging. ACE applications must be approved by the Executive Officer and be made available for public review and comment prior to Executive Officer action. Until such approval is granted the owner or operator would be required to meet the performance requirements in the CHC regulation.

G. Additional CHC Regulation Requirements

1. Comment: The proposed amendments should incorporate more stringent oxides of nitrogen (NOx) standards. Specifically, neither the current CHC regulation or the proposed amendments require in-use CHC vessels to meet federal marine Tier 4 exhaust emission standards.

“We agree there are significant challenges in developing Tier 4 upgrades for existing vessels. However, we believe that there is sufficient time available and efforts being expended by engine and after-treatment control manufacturers as they develop new engine technology to meet the 2016 Tier 4 emission standard for engines over 800 horsepower (hp), to reasonably ensure development of appropriate retrofits for engines in existing vessels.

Relative to the remainder of existing vessels that have engines with less than 800 hp, we understand that there are no Tier 4 marine engine standards. However, we believe that advances made in off-road engine controls to meet Tier 4 off-road engine exhaust standards, could be used depending on the configuration of the existing engine compartment. The current proposed amendments by CARB staff do allow for such use of off-road engines.”
(SOUTH COAST)

Agency Response: No change was made in response to this comment. Staff disagrees that requiring in-use CHC vessel engines (both under and over 800 hp) to meet federal Tier 4 marine or federal or California Tier 4 off-road engine emission standards is warranted in this rulemaking action.

During public workshops that ARB held as part of the rulemaking process for the original CHC regulation, engine owners and manufacturers raised an issue regarding staff’s initial proposal to install Tier 4 marine engines on existing CHC vessels. The U.S. EPA’s marine engine standards will require Tier 4 engines to utilize exhaust after-treatment technologies (e.g. selective catalytic reduction and diesel particulate filters). CHC vessel owners and manufacturers stated that installing Tier 4 engines with the additional exhaust aftertreatment equipment would create space, weight, and stability issues on existing vessels, and after considering these issues, staff modified the proposal so that CHC engines meeting Tier 4 standards are not required for engine repowers, but are required for new vessels.

Staff has not been provided information that demonstrates the space, weight, and stability issues have been addressed since the original CHC regulation has been adopted, and therefore declines to impose more stringent in-use requirements at this time. ARB notes that federal and California Tier 4 off-road engine standards will similarly require the same exhaust aftertreatment technologies as marine engines, and will therefore also raise these same space, weight and stability issues.

**V. SUMMARY OF PUBLIC COMMENTS AND AGENCY RESPONSES –
NOTICE OF MODIFIED TEXT**

No written comments were received related to changes made to the CHC regulation which were released for public comment with the 15-day Notice dated October 1, 2010. No comments were submitted either by the close of the comment period on October 18, 2010, or after that date.