California State Nonroad Engine Pollution Control Standards; Commercial Harbor Craft Regulations

Decision Document

United States Environmental Protection Agency

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Office of Transportation and Air Quality
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On March 19, 2023, the Environmental Protection Agency (EPA) published a *Federal Register* notice announcing its receipt of the California Air Resources Board's (CARB) authorization request for amendments adopted in 2022 to its Commercial Harbor Craft (CHC) regulation (the 2022 CHC Amendments).[1] In its notice, EPA invited public comment on California's authorization request and provided an opportunity to request a public hearing. EPA opened a docket for the authorization request at EPA-HQ-OAR-2023-0153. In response to public request, EPA announced that it would hold a public hearing on June 1, 2023,[2] and the transcript for the hearing is included in the docket. The comment period for the authorization request closed on July 1, 2023.

In this Decision Document, EPA is taking final action to grant a partial authorization for the 2022 CHC Amendments, pursuant to section 209(e) of the Clean Air Act (CAA).[3] EPA is also providing notice of the availability of this Decision Document in the *Federal Register*. As explained in Section V, EPA is granting California authorization to enforce the 2022 CHC Amendments with the following exceptions: (a) EPA is not at this time taking any action on the Zero-Emission and Advanced Technologies (ZEAT) standards for in-use short run ferries; and (b) EPA is not at this time taking any action on the standards for in-use engines and vessels (excluding commercial fishing vessels) that would apply after the expiration of the feasibility extensions when an engine or diesel particulate filter (DPF) is not feasible and the owner cannot

[1] 88 FR 16439 (March 17, 2023).
[2] 88 FR 25636 (April 27, 2023).
[3] This Decision Document can be found in the public docket at regulations.gov at EPA-HQ-OAR-2023-0153.

afford vessel replacement ("E3" extensions). Nonetheless, California is authorized to enforce provisions related to CARB Verified Diesel Emission Control Strategy (VDECS) technology that is installed on any in-use vessel at any time.

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I. Background

CARB first adopted the Commercial Harbor Craft (CHC) regulation on September 2, 2008, and EPA granted California an authorization for that regulation in 2011.[4] The initial regulation established emission standards and other emissions-related requirements applicable to both new and in-use diesel propulsion and auxiliary engines on commercial harbor craft that operate within Regulated California Waters (RCW).[5] As set out in Section 93118.5(e) of the 2008 regulation, the standards applied to new harbor craft, including ferries, and existing harbor craft, including in-use ferries, excursion vessels, tugboats, towboats, push boats, and multi-

[4] 76 FR 77521 (Dec. 13, 2011).
[5] 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. Cal. Code Regs, title 17, § 93118.5(d).

purpose craft.[6] Propulsion and auxiliary engines on new CHC were required to be certified to the most stringent federal new marine engine emission standards applicable (generally EPA Tier 2 through Tier 4 marine engine emission standards).[7] New ferry vessels capable of transporting 75 or more passengers were required to be equipped with propulsion engines certified to either Tier 4 marine engine standards, or with engines certified to Tier 2 or Tier 3 marine engine standards and also be equipped with the best available control technology (BACT) to reduce emissions of oxides of nitrogen (NOx) or particulate matter (PM) to the greatest extent feasible. New and in-use engines for in-use harbor craft were required to be certified to at least federal Tier 2 or Tier 3 marine emission standards, and in-use Tier 0 and Tier 1 propulsion and auxiliary marine engines in specified categories of in-use CHC—ferries, excursion vessels, tugboats, and towboats—were generally required to demonstrate compliance with Tier 2 or Tier 3 standards by specified compliance dates. In turn, these dates were based on both the model year and hours of operation of the in-use engines. In-use CHC with home ports in the South Coast Air Basin were subject to accelerated compliance schedules. CHC owners or operators could comply with the in-use requirements by replacing an in-use engine with a new engine, or by demonstrating that an existing engine complied with the applicable Tier 2 or Tier 3 standards (e.g., through utilization of engine rebuild kits or aftertreatment technologies), or by demonstrating that their CHC would not operate more than 300 hours in a year. Owners or operators of CHC were also required to install a non-resettable hour meter on each engine, to report certain information including contact information, vessel and engine information, annual hours operated and locations to CARB, and

[6] "Multi-purpose harbor craft" was defined as 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. Cal. Code Regs, title 17, § 93118.5(b)(45) (subsequently amended). *See* Final Regulation Order Approved by OAL effective November 19, 2008.
[7] *See* 40 CFR part 1042; 73 FR 37243 (June 30, 2008).

to only fuel diesel engines in CHC vessels with CARB diesel fuel or specified alternative diesel fuels.

On April 11, 2011, CARB adopted amendments to its CHC regulation (the 2011 Amendments). The 2011 Amendments primarily allowed CARB or EPA Tier 2 or higher certified off-road (nonroad)[8] engines to be used as auxiliary or propulsion engines in both new and in-use CHC vessels and expanded the in-use requirements to three additional vessel categories of CHC: crew and supply, barge, and dredge vessels, and removed the category "multipurpose harbor craft" from the regulation. In 2017, EPA granted CARB an authorization for certain elements of the 2011 Amendments to the CHC regulation and confirmed that other elements of the Amendments were within the scope of the previously granted authorization for CHC.[9]

On January 31, 2023, CARB submitted a new authorization request to EPA for additional amendments to the CHC regulation that EPA previously authorized in the two actions noted above.[10] Also noted above, EPA announced a public comment period and an opportunity for public hearing on March 19, 2023, and, in response to public request, EPA held a hearing on June 1, 2023, and accepted comments until July 1, 2023.

The 2022 CHC Amendments revise the emission standards and other emissions-related requirements applicable to both new and in-use diesel propulsion and auxiliary engines on CHC that operate within RCW and extend the requirements to additional categories of CHC: pilot boats, push boats, workboats, research vessels, commercial passenger fishing vessels (CPFV),

[8] The engines and equipment referred to by California as "off-road" are the same as those referred to by EPA as "nonroad." In this document, "off-road" and "nonroad" refer to the same engines and vehicles and are used interchangeably but reflect different official terminology used by CARB and EPA, respectively.
[9] 82 FR 6500 (Jan. 19, 2017).
[10] CARB's CHC Authorization Request (CHC Authorization Support Document), EPA-HQ-OAR-2023-0153-0004.

commercial fishing vessels, and temporary replacement vessels, as well as tank barges under 400 feet and 10,000 gross tons (GT).[11]

The 2022 CHC Amendments create new emission standards and compliance dates that are different depending on vessel category and, for existing vessels, engine model year. The amendments include ZEAT requirements for new and in-use ferries and new excursion vessels and phase in beginning December 31, 2024.[12] The owners of these boats are also subject to an infrastructure requirement.[13]

For other harbor craft,[14] both new and existing, the 2022 CHC Amendments set engine requirements that are equivalent in stringency to: (1) the most stringent federal marine engine standard (federal Tier 3 or Tier 4 marine engine standards) or California or federal off-road engine standards (California or federal Final Tier 4 off-road engine standards) that were in effect at the time any of the aforementioned actions occur and that are applicable to new engines with the same power ratings and displacements as the subject propulsion and auxiliary engines, and (2) reflect the addition of a "level 3" CARB Verified Diesel Emission Control Strategy (VDECS), such as a verified DPF. The exception is for engines on existing commercial fishing vessels, which are subject to less stringent emission standards.[15] The compliance dates for new vessels are a function of the date the vessel is built.[16] For existing vessels, the compliance dates

[11] The 2022 CHC Amendments also include a fuel-related requirement; this is an operational regulation not preempted by CAA section 209. *See* Section III.3.B.
[12] California Code of Regulations, Section 93118.5(e)(10).
[13] California Code of Regulations, Section 93118.5(i).
[14] "'"Harbor Craft" means any private, commercial, government, or military marine vessel including 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, barge and dredge vessels, commercial passenger fishing vessels, oil spill response 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." California Code of Regulations, Section 93118.5(d).
[15] California Code of Regulations, Section 93118.5(e)(13).
[16] California Code of Regulations, Section 93118.5(e)(8) and (9).

are a function of the engine model year;[17] after that date a non-compliant vessel may no longer be operated in the regulated waters of California.

The new requirements rely on the use of EPA-certified Tier 3 or Tier 4 engines, equipped with a DPF and, for short-run ferries and excursion vessels, ZEAT. CARB's CHC Authorization Support Document and other materials describe how these standards are technologically feasible. However, CARB acknowledged that no DPFs have been certified for marine applications yet. Given this, CARB allows regulated entities to seek compliance extensions, which are available for the ZEAT and related infrastructure requirements[18] and the existing vessel requirements.[19] A vessel owner may apply for and receive approval for a compliance extension. There are five extensions available, as follows:

- Extension type 1 (E1) Shore power and ZEAT infrastructure delays: one year; can be renewed once;
- Extension type 2 (E2) No certified engines or DPFs available: two-years; unlimited renewals;[20]
- Extension type 3 (E3) Engines or DPFs not feasible and owner cannot afford vessel replacement: two years; can be renewed; cannot exceed 6-8 years (depending on vessel type), when combined with other extensions, or extend past December 31, 2034;[21]

[17] California Code of Regulations, Section 93118.5(e)(12).
[18] California Code of Regulations, Sections 93118.5(e)(10) and (i).
[19] California Code of Regulations, Section 93118.5(e)(12) and (13).
[20] As a condition of receiving this extension, the engine must meet the most stringent Federal marine engine standards (Tier 3 or Tier 4) or California or Federal Tier 4 Final off-road standards plus a level 3 verified DPF within 6 months of one becoming available for the engine installed on the vessel. California Code of Regulations, Section 93118.5(e)(12)(E)(2)(d).
[21] Commercial passenger fishing vessels may obtain one ten-year extension under (E3). California Code of Regulations, Section 93118.5(e)(12)(E)(3)(a).

- Extension type 4 (E4) Tier 4 engines with limited operating hours and DPFs not feasible: two years; unlimited renewals; and
- Extension type 5 (E5) Scheduling extension: one year; unlimited renewals.[22]

For new vessels, this means that beginning January 1, 2023, each engine in a regulated category must meet the most stringent federal marine engine standards (Tier 3 or Tier 4) or California or federal Tier 4 Final off-road standards plus a level 3 verified DPF. If no DPF is available, the vessel should be designed to install one once a DPF becomes available. In the meantime, once the ship goes into service, it becomes an existing vessel with respect to the DPF requirement and would be eligible for an E2 availability extension followed by a scheduling extension, if necessary. For existing vessels, each engine on any ship in a regulated category must meet the most stringent federal marine engine standards (Tier 3 or Tier 4) or California or federal Tier 4 Final off-road standards plus a level 3 verified DPF by the relevant compliance date, as adjusted by the relevant extensions. Once the feasibility extensions expire, the vessels with noncompliant engines may no longer be used on RCW. The owner then has the choice of replacing the vessel or ceasing operation in California.

II. Principles Governing This Review

A. Clean Air Act Nonroad Engine and Vehicle Authorizations

CAA section 209(e)(1) prohibits states and local governments from adopting or attempting to enforce any standard or requirement relating to the control of emissions from certain new nonroad vehicles or engines.[23] The CAA also preempts states from adopting and

[22] California Code of Regulations, Section 93118.5(e)(12)(E).
[23] CAA section 209(e)(1) prohibits states or any political subdivision from adopting or enforcing any standard or other requirement relating to the control of emissions from new engines which are used in construction equipment or vehicles or used in farm equipment or vehicles, and which are smaller than 175 horsepower, or new locomotives or new engines used in locomotives. *See* 40 CFR section 1074.10(a).

enforcing standards and other requirements related to the control of emissions from all other nonroad engines (including "non-new" engines) or vehicles.[24] CAA section 209(e)(2)(A), however, requires EPA, after notice and opportunity for public hearing, to authorize California to adopt and enforce standards and other requirements relating to the control of emissions from such vehicles or engines not preempted by CAA section 209(e)(1) if California determines that California standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. However, EPA shall not grant such authorization if it finds that (1) the protectiveness determination of California (*i.e.,* that California standards will be, in the aggregate, as protective of public health and welfare as applicable federal standards) is arbitrary and capricious; (2) California does not need such standards to meet compelling and extraordinary conditions; or (3) California standards and accompanying enforcement procedures are not consistent with CAA section 209.

On July 20, 1994, EPA promulgated a rule (the 1994 rule) that sets forth, among other things, regulations providing the criteria, as found in CAA section 209(e)(2), which EPA must consider before granting any California authorization request for new nonroad engine or vehicle emission standards.[25] EPA revised these regulations in 1997.[26]

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[24] *See* CAA section 209(e)(2), 42 U.S.C. 7543(e). *See* 40 CFR section 1074(b). States and localities are categorically prohibited from regulating the control of emissions from new nonroad vehicles and engines set forth in section 209(e)(1) of the CAA, but "all other" nonroad vehicles and engines (including non-new engines and vehicles otherwise noted in 209(e)(1) and all other new and non-new nonroad engines and vehicles) are preempted unless and until preemption is waived. *See* EPA's nonroad preemption rulemakings at 59 FR 36969 (1994)) and revised in 1997 (62 FR 67733). EPA notes that Appendix A to 40 CFR Part 1074, Subpart A sets out EPA's interpretation of what types of state nonroad engine use and operation provisions are not preempted by section 209.

[25] ''Air Pollution Control; Preemption of State Regulation for Nonroad Engine and Vehicle Standards,'' 59 FR 36969 (July 20, 1994).

[26] *See* ''Control of Air Pollution: Emission Standards for New Nonroad Compression-Ignition Engines at or Above 37 Kilowatts; Preemption of State Regulation for Nonroad Engine and Vehicle Standards; Amendments to Rules,'' 62 FR 67733 (December 30, 1997). The applicable regulations are now found in 40 CFR part 1074, subpart B, Part 1074.

As stated in the preamble to the 1994 rule, EPA historically has interpreted the CAA section 209(e)(2)(A)(iii) "consistent with section 209" inquiry to require that California standards and enforcement procedures be consistent with CAA sections 209(a), 209(e)(1), and 209(b)(1)(C).[27] In order to be consistent with CAA section 209(a), California's nonroad standards and enforcement procedures must not apply to new motor vehicles or new motor vehicle engines. To be consistent with CAA section 209(e)(1), California's nonroad standards and enforcement procedures must not attempt to regulate engine categories that are permanently preempted from state regulation. To determine consistency with CAA section 209(b)(1)(C), EPA typically reviews nonroad authorization requests under the same "consistency" criteria that are applied to motor vehicle waiver requests. Pursuant to CAA section 209(b)(1)(C), the Administrator shall not grant California a motor vehicle waiver if he finds that California "standards and accompanying enforcement procedures are not consistent with section 202(a)" of the CAA. Previous decisions granting waivers and authorizations have noted that state standards and enforcement procedures are inconsistent with CAA section 202(a) if: (1) there is inadequate lead time to permit the development of the necessary technology giving appropriate consideration to the cost of compliance within that time, or (2) the Federal and state testing procedures impose inconsistent certification requirements.[28] When considering whether to grant authorizations for accompanying enforcement procedures tied to standards (such as record keeping and labeling requirements) for which an authorization has already been granted, EPA has evaluated (1) whether the enforcement procedures are so lax that they threaten the validity of California's determination that its standards are as protective of public health and welfare as

[27] 59 FR 36982–83.
[28] *Id. See also* 78 FR 58090, 58092 (Sept. 20, 2013).

applicable Federal standards, and (2) whether the Federal and California enforcement procedures are consistent.[29]

In light of the similar language of sections 209(b) and 209(e)(2)(A), EPA has reviewed California's requests for authorization of nonroad vehicle or engine standards under section 209(e)(2)(A) using the same principles that it has historically applied in reviewing requests for waivers of preemption for new motor vehicle or new motor vehicle engine standards under section 209(b).[30] These principles include, among other things, that EPA should limit its inquiry to the three specific authorization criteria identified in section 209(e)(2)(A),[31] and that EPA should give substantial deference to the policy judgments California has made in adopting its regulations. In previous waiver decisions, EPA has stated that Congress intended EPA's review of California's decision-making be narrow. EPA has rejected arguments that are not specified in the statute as grounds for denying a waiver:

> The law makes it clear that the waiver requests cannot be denied unless the specific findings designated in the statute can properly be made. The issue of whether a proposed California requirement is likely to result in only marginal improvement in California air quality not commensurate with its costs or is otherwise an arguably unwise exercise of regulatory power is not legally pertinent to my decision under section 209, so long as the California requirement is consistent with section 202(a) and is more stringent than applicable Federal requirements in the sense that it may result in some further reduction in air pollution in California.[32]

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[29] *See Motor & Equipment Manufacturers Association v. Environmental Protection Agency* ("*MEMA I*"), 627 F.2d 1095, 1112 (D.C. Cir. 1979). California certification test procedures need not be identical to the Federal test procedures to be "consistent." California procedures would be inconsistent, however, if manufacturers would be unable to meet both the state and Federal test requirements with the same test vehicle in the course of the same test. *See, e.g.,* 43 FR 32182, (July 25, 1978).

[30] *See Engine Manufacturers Association v. EPA,* 88 F.3d 1075, 1087 (D.C. Cir. 1996).

[31] 59 FR at 36983 n.12.

[32] "Waiver of Application of Clean Air Act to California State Standards," 36 FR 17458 (Aug. 31, 1971). Note that the more stringent standard expressed here, in 1971, was superseded by the 1977 amendments to section 209, which established that California must determine that its standards are, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. In the 1990 amendments to section 209, Congress established section 209(e) and similar language in section 209(e)(1)(i) pertaining to California's nonroad emission standards which California must determine to be, in the aggregate, at least as protective of public health and welfare as applicable federal standards.

This principle of narrow EPA review has been upheld by the U.S. Court of Appeals for the District of Columbia Circuit.[33] Thus, EPA's consideration of all the evidence submitted concerning an authorization decision is circumscribed by its relevance to those questions that may be considered under section 209(e)(2)(A).

B. Deference to California

In previous waiver and authorization decisions, EPA has recognized that the intent of Congress in creating a limited review based on specifically listed criteria was to ensure that the Federal government did not second-guess state policy choices. As the Agency explained in a prior waiver decision:

> It is worth noting . . . I would feel constrained to approve a California approach to the problem which I might also feel unable to adopt at the federal level in my own capacity as a regulator. The whole approach of the Clean Air Act is to force the development of new types of emission control technology where that is needed by compelling the industry to "catch up" to some degree with newly promulgated standards. Such an approach . . . may be attended with costs, in the shape of reduced product offering, or price or fuel economy penalties, and by risks that a wider number of vehicle classes may not be able to complete their development work in time. Since a balancing of these risks and costs against the potential benefits from reduced emissions is a central policy decision for any regulatory agency under the statutory scheme outlined above, I believe I am required to give very substantial deference to California's judgments on this score.[34]

EPA has stated that the text, structure, and history of the California waiver provision clearly indicate both a Congressional intent and appropriate EPA practice of leaving the decision on "ambiguous and controversial matters of public policy" to California's judgment.[35]

This interpretation is supported by relevant discussion in the House Committee Report for the 1977 Amendments to the CAA. Congress had the opportunity through the 1977

[33] *See, e.g., MEMA I*, 627 F.2d at 1119.
[34] *See*, "California State Motor Vehicle Pollution Control Standards; Waiver of Federal Preemption," 40 FR 23102, 23103–23104 (May 28, 1975).
[35] *Id.*

Amendments to restrict the preexisting waiver provision but elected instead to expand California's flexibility to adopt a complete program of motor vehicle emission controls. The report explains that the amendment is intended to ratify and strengthen the preexisting California waiver provision and to affirm the underlying intent of that provision, that is, to afford California the broadest possible discretion in selecting the best means to protect the health of its citizens and the public welfare.[36]

C. Burden and Standard of Proof

As the U.S. Court of Appeals for the D.C. Circuit made clear in *MEMA I*, opponents of the waiver or authorization request by California bear the burden of showing that the statutory criteria for a denial of the request have been met:

> The language of the statute and its legislative history indicate that California's regulations, and California's determinations that they comply with the statute, when presented to the Administrator are presumed to satisfy the waiver requirements and that the burden of proving otherwise is on whoever attacks them. California must present its regulations and findings at the hearing and thereafter the parties opposing the waiver request bear the burden of persuading the Administrator that the waiver request should be denied.[37]

The Administrator's burden, on the other hand, is to make a reasonable evaluation of the information in the record in coming to the waiver or authorization decision. As the court in *MEMA I* stated, "here, too, if the Administrator ignores evidence demonstrating that the waiver should not be granted, or if he seeks to overcome that evidence with unsupported assumptions of his own, he runs the risk of having his waiver decision set aside as 'arbitrary and capricious.'"[38] Therefore, the Administrator's burden is to act "reasonably."[39]

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[36] *MEMA I*, 627 F.2d at 1110 (citing H.R. Rep. No. 294, 95th Cong., 1st Sess. 301–02 (1977)).
[37] *MEMA I*, 627 F.2d at 1121.
[38] *Id.* at 1126.
[39] *Id.*

With regard to the standard of proof, the court in *MEMA I* explained that the Administrator's role in a CAA section 209 proceeding is to;

> [. . .] consider all evidence that passes the threshold test of materiality and * * * thereafter assess such material evidence against a standard of proof to determine whether the parties favoring a denial of the waiver have shown that the factual circumstances exist in which Congress intended a denial of the waiver.[40]

In that decision, the court considered the standard of proof under CAA section 209 for the two findings related to granting a waiver for an "accompanying enforcement procedure." Those findings involve: (1) Whether the enforcement procedures impact California's prior protectiveness determination for the associated standards, and (2) whether the procedures are consistent with CAA section 202(a). The principles set forth by the court, however, are similarly applicable to an EPA review of a request for a waiver of preemption for a standard. The court instructed that "the standard of proof must take account of the nature of the risk of error involved in any given decision, and it therefore varies with the finding involved. We need not decide how this standard operates in every waiver decision."[41]

With regard to the protectiveness finding, the court upheld the Administrator's position that, to deny a waiver, there must be "clear and compelling evidence" to show that proposed procedures undermine the protectiveness of California's standards.[42] The court noted that this standard of proof also accords with the Congressional intent to provide California with the broadest possible discretion in setting regulations it finds protective of the public health and welfare.[43]

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[40] *Id.* at 1122.
[41] *Id.*
[42] *Id.*
[43] *Id.*

With respect to the consistency finding, the court did not articulate a standard of proof applicable to all proceedings but found that the opponents of the waiver were unable to meet their burden of proof even if the standard were a mere preponderance of the evidence. Although *MEMA I* did not explicitly consider the standard of proof under CAA section 209 concerning a waiver request for "standards," as compared to accompanying enforcement procedures, there is nothing in the opinion to suggest that the Court's analysis would not apply with equal force to such determinations. EPA's past waiver decisions have consistently made clear that: "[E]ven in the two areas concededly reserved for Federal judgment by this legislation—the existence of 'compelling and extraordinary' conditions and whether the standards are technologically feasible—Congress intended that the standards of EPA review of the State decision to be a narrow one."[44]

D. EPA's Administrative Process in Consideration of California's Request

On March 19, 2023, EPA issued a notice for comment regarding CARB's authorization request for the 2022 CHC Amendments.[45] The notice requested the public provide EPA with comment on issues relevant to EPA's consideration of the request along with an opportunity to request a public hearing. EPA did receive a request for public hearing on the 2022 CHC Amendments and subsequently announced a hearing date of June 1, 2023, and extended the comment period associated with that request to July 1, 2023.[46]

EPA requested comment on the 2022 CHC Amendments, and whether they meet the criteria for a full authorization. Specifically, EPA requested public comment on: (a) whether

[44] 80 FR 76468, 76471 (December 9, 2015).
[45] *See* "California State Nonroad Engine Pollution Control Standards; Ocean-Going Vessels At-Berth and Commercial Harbor Craft; Requests for Authorization; Opportunity for Public Hearing and Comment" 88 FR 16439 (March 17, 2023).
[46] 88 FR 25636, April 27, 2023; this hearing was for only the 2022 CHC Amendments and did not include the 2020 At-Berth amendments.

CARB's determination that its standards, in the aggregate, are at least as protective of public health and welfare as applicable federal standards is arbitrary and capricious, (b) whether California needs such standards to meet compelling and extraordinary conditions, and (c) whether California's standards and accompanying enforcement procedures are consistent with section 209 of the Act.[47]

EPA received written comments from health and environmental organizations, industry, manufacturers and end users, and individuals, all of which can be found, along with a transcript of the public hearing including all oral testimonies provided, in the public docket.[48] EPA addresses these comments below.

III. Response to Comments Regarding the Authorization Criteria

[47] *Id.*

[48] All American Marine, Inc. (AAM), EPA-HQ-OAR-2023-0153-0019; American Lung Association, EPA-HQ-OAR-2023-0153-0026; American Waterways Operators (AWO), EPA-HQ-OAR-2023-0153-0043; American Waterways Operators (AWO), EPA-HQ-OAR-2023-0153-0055; American Waterways Operators et al., EPA-HQ-OAR-2023-0153-0018; AMNAV Maritime, EPA-HQ-OAR-2023-0153-0047; Angel Island Tiburon Ferry Inc., EPA-HQ-OAR-2023-0153-0056; Anita Youabian, EPA-HQ-OAR-2023-0153-0064; Ann Harvey, EPA-HQ-OAR-2023-0153-0025; Anonymous public comment, EPA-HQ-OAR-2023-0153-0053; Baydelta Maritime, EPA-HQ-OAR-2023-0153-0011; Baydelta Maritime, EPA-HQ-OAR-2023-0153-0014; Baydelta Maritime, EPA-HQ-OAR-2023-0153-0049; Big Sky Grant Associates, LLC, EPA-HQ-OAR-2023-0153-0017; Centerline Logistics Corporation, EPA-HQ-OAR-2023-0153-0012; Centerline Logistics Corporation, EPA-HQ-OAR-2023-0153-0046; Conshelf Services, EPA-HQ-OAR-2023-0153-0040; Crowley Maritime Corporation, EPA-HQ-OAR-2023-0153-0052; Cruise Lines International Association (CLIA), EPA-HQ-OAR-2023-0153-0032; Curtin Maritime Corp., EPA-HQ-OAR-2023-0153-0051; Earthjustice et al., EPA-HQ-OAR-2023-0153-0044; Earthjustice et al., EPA-HQ-OAR-2023-0153-0061; EV Maritime, EPA-HQ-OAR-2023-0153-0059; Green Yachts, EPA-HQ-OAR-2023-0153-0058; Ian Brothers, EPA-HQ-OAR-2023-0153-0016; International Organization of Masters, and Mates & Pilots (MMP) et al., EPA-HQ-OAR-2023-0153-0037; Island Packers Cruises, EPA-HQ-OAR-2023-0153-0031; Jacobsen Pilot Service, Inc., EPA-HQ-OAR-2023-0153-0030; Kirby Offshore Marine, LLC, EPA-HQ-OAR-2023-0153-0038; North Tahoe Cruises Tahoe Gal, EPA-HQ-OAR-2023-0153-0057; Ocean Conservancy, EPA-HQ-OAR-2023-0153-0033; Passenger Vessel Association (PVA), EPA-HQ-OAR-2023-0153-0015; Passenger Vessel Association (PVA), EPA-HQ-OAR-2023-0153-0048; R.E. Staite Engineering, Inc. (RES), EPA-HQ-OAR-2023-0153-0039; Saltchuk Marine, EPA-HQ-OAR-2023-0153-0010; Saltchuk Marine, EPA-HQ-OAR-2023-0153-0028; Sam Reed, EPA-HQ-OAR-2023-0153-0024; San Diego Working Waterfront, EPA-HQ-OAR-2023-0153-0034; San Francisco Bar Pilots Association, EPA-HQ-OAR-2023-0153-0045; Seabulk, EPA-HQ-OAR-2023-0153-0036; Shaver Transportation Company, EPA-HQ-OAR-2023-0153-0042; Starlight Marine Services LLC, EPA-HQ-OAR-2023-0153-0009; Suzanne Hume, EPA-HQ-OAR-2023-0153-0065; The American Waterways Operators (AWO), EPA-HQ-OAR-2023-0153-0007; The Vane Brothers Company, EPA-HQ-OAR-2023-0153-0027; Truck and Engine Manufacturers Association, EPA-HQ-OAR-2023-0153-0035; Vane Brothers Company, EPA-HQ-OAR-2023-0153-0050; Vane Line Bunkering Inc., EPA-HQ-OAR-2023-0153-0008; Westar Marine Services, EPA-HQ-OAR-2023-0153-0013; Westar Marine Services, EPA-HQ-OAR-2023-0153-0041; Wind Wing Technologies, Inc., EPA-HQ-OAR-2023-0153-0060; Zoë Edington, EPA-HQ-OAR-2023-0153-0063.

In this section, EPA addresses the comments received with respect to the three authorization criteria.

A. First Authorization Criterion

CAA section 209(e)(2)(A)(i) instructs that EPA cannot grant an authorization if the Agency finds that California was arbitrary and capricious in its determination that its standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards.

EPA's evaluation of this first authorization prong is performed under the construct explained here. CAA section 209(e)(2)(A)(i) requires EPA to grant an authorization unless the Administrator finds that California has been arbitrary and capricious in its determination that its State standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards. EPA may not disregard California's determination unless there is ''clear and compelling evidence'' to the contrary.[49] Moreover, "[t]he language of the statute and its legislative history indicate that California's regulations, and California's determination that they comply with the statute, when presented to the Administrator are presumed to satisfy the waiver requirements."[50] Additionally, "the parties opposing the waiver request bear the burden of persuading the Administrator that the waiver request should be denied."[51]

CARB states that as with standards for new on-road motor vehicles and engines, California evaluates the protectiveness of its nonroad standards "in the aggregate," assessing whether the State's standards, as a whole regulatory program, are at least as protective as EPA's standards.[52] CARB notes that this protectiveness assessment also takes place against the

[49] *MEMA I,* 627 F.2d 1095, 1121–22 (D.C. Cir. 1979).
[50] *Id.; see also Ford Motor Co. v. EPA*, 606 F.2d 1293, 1297 (D.C. Cir. 1979).
[51] *MEMA I*, 627 F.2d at 1121.
[52] CHC Authorization Support Document at 25. EPA-HQ-OAR-2023-0153-0004.

backdrop of prior nonroad authorizations granted for which California determined, and EPA affirmed, that California's existing nonroad emissions program is at least as protective as EPA's.[53]

CARB states in its CHC Authorization Support Document that, in adopting the 2022 CHC Amendments, CARB's Board approved Resolution 22-6, in which it expressly declared, "the Board hereby determines that the amended regulations adopted herein will not cause California's off-road engine emission standards, in the aggregate, to be less protective of public health and welfare than applicable federal standards."[54] CARB states in their CHC Authorization Support Document that there is no basis for EPA to find the Board's determination is arbitrary and capricious since (1) its threshold requirement for new and newly-acquired in-use harbor craft and new and newly-acquired in-use engines acquired for in-use harbor craft is to certify to federal Tier 3 or Tier 4 marine engine emission standards (or California Final Tier 4 off-road engine standards applicable to such engines)—these standards are identical to the federal standards applicable to new marine and off-road engine standards; and (2) its remaining requirements, including DPF-equivalent emission performance, methane limits, use of ZEAT in short-run ferries and excursion vessels, are both individually and collectively more stringent than comparable federal standards, because there are no comparable federal standards.[55]

In evaluating CARB's authorization request under the first prong, EPA is following its traditional practice, which represents the best reading of the statute. This approach begins by

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[53] *Id.* EPA notes that its recently granted nonroad authorization confirmed the approach of determining whether CARB's nonroad amendments undermine California's previous determination that its standards and accompanying enforcement procedures, in the aggregate, are at least as protective of public health and welfare as applicable federal standards. 88 FR 24411, 24414 (April 20, 2023).

[54] CARB, Resolution 22-6, March 24, 2022 (quoted in CHC Authorization Support Document at 25). https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/reso22-6chc.pdf, accessed December 18, 2024.

[55] CHC Authorization Support Document at 25-26, *citing* CAA section 213 (EPA's authority to set nonroad emission standards for new nonroad engines and vehicles) and *Engine Manufacturers Association v. EPA,* 88 F.3d 1075 (D.C. Cir 1996) ("*EMA*").

comparing the stringency of the specific standards that CARB has submitted for authorization with the relevant federal standards. If each CARB standard is more stringent than the relevant federal standards, then the first authorization criterion is satisfied. In addition, in the event that it appears that a specific California standard may be less stringent than an applicable federal standard, then EPA will evaluate whether California's standards as a whole are 'in the aggregate" as protective of public health and welfare as applicable federal standards for nonroad vehicles and engines. In that circumstance, even if the standards in question are less stringent than the relevant federal standards, so long as California's nonroad standards, in the aggregate, are more stringent than the federal standards, the first authorization criteria is satisfied.

No evidence was submitted to support an argument that the stringency of CARB's CHC regulation is numerically less stringent than the applicable EPA standard. EPA does not have the authority to regulate in-use CHC under its regulatory authority set forth in section 213 of the CAA, therefore any regulation by CARB reducing emissions from in-use vessels is by definition more stringent than non-existent applicable federal standards. Where federal standards do exist for new vessels and engines, CARB's standards use federally-defined engine tiers and are therefore equivalent in stringency.[56] Therefore, EPA cannot find that CARB was arbitrary and capricious in its protectiveness determination and cannot deny CARB's authorization request based on a finding under CAA section 209(e)(2)(A)(i).

Two commenters stated that the 2022 CHC Amendments would cause adverse environmental impacts.[57] One commenter stated that the amendments would effectively bar operation of their ocean-going vessel (OGV) articulated tug barges (ATBs) from operating in

[56] *See* 40 CFR part 1042.
[57] Crowley Maritime Corporation ("Crowley"), EPA-HQ-OAR-2023-0153-0052; Island Packers Cruises, EPA-HQ-OAR-2023-0153-0031.

California, requiring alternate methods of transporting petroleum products, all of which they claim are "dirtier" than OGV-ATBs.[58] The other commenter claimed that the cost of complying with the amendments would prevent innovation in emissions reduction from occurring.[59] They further claimed that they would need to install larger diesel auxiliary power units than they currently operate to support the power required by DPF active regeneration, in turn causing increased emissions compared to replacing current auxiliary diesel engines with batteries.

As noted above, EPA's scope of review of CARB's authorization request is narrow and is limited to the criteria in CAA section 209(e)(2)(A). As explained below, commenters have not submitted information or data showing CARB's standards, whether alone or in the aggregate, to be less protective than applicable federal standards. EPA does not consider California's policy choices as to how it achieves emissions reductions, as long as its choice satisfies the "in the aggregate" criteria set forth in section 209(e)(2)(A).[60]

EPA notes that the commenters here did not provide record evidence to substantiate their claims, and even if such evidence is implicit or otherwise exists within the claims, CARB has reasonably addressed the claims. Regarding ATBs, CARB identified multiple operational similarities to other CHC vessels, yet extended flexibility for their emission control compliance through a CARB-approved Alternative Control of Emissions (ACE) plan that allows operators to opt to use certain equipment or shore power to control barge emissions while at berth.[61] The claim that these vessels are therefore barred from operation is unsubstantiated, as is the claim that the products carried by these vessels would shift to other conveyances, let alone whether

[58] Crowley.
[59] Island Packers Cruises.
[60] *See also* Clean Air Act Amendments of 1977, Pub. L. No. 95–95, § 207, 91 Stat. 685; *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. New York State Dep't of Env't Conservation*, 17 F.3d 521, 525 (2d Cir. 1994).
[61] Staff Report, Initial Statement of Reasons, Date of Release September 21, 2021 ("CARB ISOR") at I-6–7; *see* CHC Authorization Support Document at 17–18.

such other paths involve higher emissions burdens or would undermine CARB's "in the aggregate" protectiveness finding.

Similarly, whether a speculative potential for installing batteries is replaced by the need to install auxiliary engines to power DPF regeneration does not undermine that finding. CARB considered DPF operating temperature requirements[62] and effects on emissions.[63] Meanwhile, the commenter did not claim to have an acquisition process underway to replace current auxiliary engines with battery systems. Nor did the commenter demonstrate that, even if these claims were correct, that the claimed need for auxiliary engines sufficiently increases emissions to undermine CARB's protectiveness determination in the aggregate. Since there was no pre-existing requirement for the installation of batteries on relevant vessels, CARB's analysis and policy choices are not offset by the commenter's hypothetical alternative.

EPA also received comments that questioned whether CARB adequately justified the available emissions reductions from the 2022 CHC Amendments in its protectiveness determination. Two commenters claimed flaws in CARB's emission inventory, calling for third-party verification.[64] Other commenters went further and specifically questioned the towing vessel inventory used by CARB, claiming that the count was too high. Two such commenters cited an independent study by Ramboll that had reduced inventory based on automatic identification system ("AIS") data.[65] These commenters claimed that this data showed that "non-reporting"

[62] *See id.* at I-34–35; Response to Comments on the Draft Environmental Analysis released March 14, 2022 ("CARB Response to Comments") at 47–48.
[63] CARB ISOR app. D-1 at D-73–74 (noting that "[p]ost-combustion technologies such [sic] DPFs tend to slightly increase GHG emissions due to increased fuel or power use . . . However, DPFs also remove black carbon, a component of DPM [diesel particulate matter] and a short-lived climate pollutant").
[64] Island Packers Cruises; Kirby Offshore Marine LLC ("Kirby"), EPA-HQ-OAR-2023-0153-0038.
[65] American Waterways Association ("AWO"), EPA-HQ-OAR-2023-0153-0043 and -0055; Curtin Maritime, EPA-HQ-OAR-2023-0153-0051.

vessels account for a smaller percentage of the total operating hours assumed by CARB. Another two commenters cited their own data for inventory discrepancies.[66]

CARB noted that while "AIS is generally a good indicator of where vessels operate," it contains various discrepancies, errors, and lacks the specificity needed to provide the basis for rulemaking.[67] Instead, CARB primarily relied on the legally-mandated U.S. Coast Guard database of vessel registration, which it identified as the best available data, "particularly when compared with a useful but not error-free AIS system," and barring "an ongoing systematic reason to register vessels in California before moving them out of state."[68] Going forward, CARB stated that it will continue outreach efforts to increase direct activity reporting from vessel owners, which together with registration data provides "by far the best sources available for non-reported vessels."[69]

As noted above, the scope of EPA's review of the first authorization prong is limited to examining the stringency of CARB's emission standards, in the aggregate, in comparison to applicable Federal standards and the burden of proof lies with the opponents of the authorization. Based on the record, the opponents have not met their burden of proof and therefore EPA cannot deny the authorization request on the basis of the first prong. These comments are not germane as even assuming CARB's emission inventory was flawed and CARB overestimated the benefits of its rule, nothing in CAA section 209(e)(2)(A)(i) (or section 209(e) generally) requires CARB to achieve a specific level of benefits beyond the Federal program. The commenter failed to show how its alleged inventory-related claims were so grave as to render CARB's nonroad

[66] Kirby; Westar Marine Services, EPA-HQ-OAR-2023-0153-0041.
[67] Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response Public Hearing Date: November 19, 2021, and March 24, 2022 ("CARB FSOR") at 225. EPA-HQ-OAR-2023-0153-0006.
[68] *Id.* at 226.
[69] *Id.*

program less protective than the Federal program in the aggregate. In addition, although not germane to section 209(e)(2)(A)(i), EPA also finds that opponents have not demonstrated that inaccuracy of CARB's count of total affected vessels undermines California's protectiveness determination.[70] Compared to Coast Guard registration data, reporting data to CARB as of February 2019 reflected only about half of the total CHC population in California.[71] CARB then scaled its reporting data to reflect local and statewide Coast Guard vessel counts, and refined its engine and vessel population according to stakeholder input, resulting in a total scaled CHC population of 3,159 vessels (down from the Coast Guard value of 3,692, but more than CARB reporting at 1,908).[72] By contrast, commenters did not demonstrate how AIS is a superior source of data, nor did they convince CARB of that position during the development of the amendments. And beyond comparing conclusions drawn from each set of data, they failed to explain how AIS data could be applied to correct Coast Guard counts, let alone how such a correction would compare to the scaling and corrections applied by CARB. Indeed, CARB responded to explain how its use of registration data constituted the best available data.[73] Commenters opposing CARB's vessel population data did not meet their burden.

Therefore, EPA cannot find that CARB was arbitrary and capricious in its protectiveness determination and cannot deny CARB's authorization request based on a finding under CAA section 209(e)(2)(A)(i).

[70] EPA also notes that it considers CARB's vessel population to not bear on California's need for standards to meet compelling and extraordinary conditions. As noted in Section III.B, this need is defined by the conditions existing in California, not by the amount of emission reductions expected by the standards under review.
[71] CARB ISOR app. C-1 at A-19.
[72] *Id.*
[73] CARB FSOR at 225–26.

B. Second Authorization Criterion

Under CAA section 209(e)(2)(A)(ii), EPA must grant an authorization for California nonroad vehicle and engines standards and accompanying enforcement procedures unless EPA finds that California "does not need such State standards to meet compelling and extraordinary conditions." EPA has traditionally interpreted this provision, consistent with its interpretation of similar language in section 209(b)(1)(B), as requiring consideration of whether conditions in California justify the need for a separate nonroad vehicle and engine program to meet compelling and extraordinary conditions, and not whether any given standard or set of standards is necessary to meet such conditions.[74]

Congress intended to allow California to address its extraordinary environmental conditions and foster its role as a laboratory for control of emissions from nonroad vehicles and engines. The Agency's longstanding practice therefore has been to evaluate CARB's requests with the broad discretion to allow California to select the means it determines best to protect the health and welfare of its citizens in recognition of both the harsh reality of California's air pollution and the importance of California's ability to serve as a pioneer and a laboratory for the nation in setting new motor vehicle emission standards and developing control technology.[75] EPA notes that "the statute does not provide for any probing substantive review of the California standards by federal officials."[76] As a general matter, EPA has applied the traditional interpretation in the same way for all air pollutants, criteria and GHG pollutants alike.[77] In the CHC Authorization Support Document, CARB stated that EPA has traditionally interpreted

[74] *See, e.g.,* 82 FR 6525 (January 19, 2017); 78 FR 58090 (September 20, 2013).
[75] *See*, e.g., S. Rep. No. 403, 90th Cong., 1st Sess. 33 (1967) (The waiver of preemption is for California's ''unique problems and pioneering efforts.''); 113 Cong. Rec. 30950, 32478 (''[T]he State will act as a testing agent for various types of controls and the country as a whole will be the beneficiary of this research.'') (Statement of Sen. Murphy).
[76] *Ford Motor v. EPA*, 606 F.2d 1293, 1300 (D.C. Cir. 1979).
[77] 74 FR at 32763; 76 FR 34693; 79 FR 46256; 81 FR 95982; 88 FR 20688.

CAA sections 209(b)(1)(B) and 209(e)(2)(A)(ii) as requiring an inquiry regarding California's need for a separate motor vehicle and nonroad engine and equipment emissions control program, respectively, to meet compelling and extraordinary conditions, and not whether any given standard is necessary to meet such conditions.[78] CARB also stated that even under an alternative interpretation where the need for each standard is assessed, that the CHC standards are needed to address both criteria pollutants and greenhouse gas emission.[79] EPA has expressed this as an inquiry into "the existence of 'compelling and extraordinary' conditions" of the kind for which a separate state program of controls remains warranted. In other words, "review … under section 209(b)(1)(B) is not based on whether California has demonstrated a need for the particular regulations, but upon whether California needs standards to meet compelling and extraordinary conditions."[80]

CARB notes that California, particularly in the South Coast and San Joaquin Valley Air Basins, "continues to experience some of the worst air quality in the nation and the South Coast and San Joaquin Valley Air Basins, in particular, continue to be in extreme non-attainment with national ambient air quality standards for ozone and serious non-attainment with national ambient air quality standards for particulate matter."[81] CARB identified CHCs as significant sources of harmful air pollutants, and the need for CARB to achieve reductions of NOx and PM

[78] CARB CHC Authorization Support Document at 27.
[79] CARB CHC Authorization Support Document at 29. CARB notes that EPA has reconsidered its SAFE I action that had interpreted the second waiver prong as requiring an inquiry into the need for each standard. EPA notes that it continues to believe the best interpretation of the second waiver prong is that set forth in the SAFE I reconsideration action (87 FR 14332 (March 14, 2022). Nonetheless, even if EPA were to apply the alternative interpretation, we would still find that the State needs the 2022 CHC Amendments to meet compelling and extraordinary conditions, substantially for the reasons stated in CARB's CHC authorization request.
[80] CARB CHC Authorization Support Document at 27.
[81] *Id.* at 28. See https://www3.epa.gov/airquality/greenbook/ancl.html#CA, last consulted November 30, 2024, located at EPA-HQ-OAR-2023-0153 for a list of the nonattainment areas in California both for ozone and $PM_{2.5}$.

to attain the national ambient air quality standards (NAAQS) for ozone and PM.[82] In addition, CARB noted the public health and air quality benefits that would accrue from these reductions in NOx and PM emissions, including "to reduce the total number of incidents for premature mortality, cardiovascular and respiratory hospitalizations, and emergency room visits between 2023-2028, in an amount equivalent to monetized health benefits of approximately $5.25 billion."[83] CARB also notes that even under the alternative interpretation of the second prong, California's need for individual GHG emissions standards to meet compelling and extraordinary conditions continues to exist "because many CHC are powered by diesel-fueled [sic] engines that emit GHGs" and "emissions of GHGs from the maritime industry is projected to increase by up to 250 percent from current levels by 2050, due to industry growth."[84]

EPA received comment that noted the American Lung Association's April 2023 report, which ranks cities and counties based on ozone and particle pollution, "found that California is home to six of the ten most ozone-polluted cities in the United States, including the top four."[85] A commenter noted that CHCs and ships "are a growing obstacle for attainment in the South Coast . . . projected to emit 36 tons per day of NOx emissions in the South Coast, more than mobile or non-mobile source [sic] in the region."[86] Likewise, another commenter agreed that CHCs account for "one of the largest sources of toxic diesel pollution for Californians living in, or near, port adjacent communities."[87]

[82] *Id.* at 30. CARB projects the 2022 CHC Amendments to cumulatively reduce statewide emissions of approximately 33,340 tons of oxides of nitrogen and 1,610 tons of particulate matter ($PM_{2.5}$) from 2023 to 2028.
[83] CARB CHC Authorization Support Document at 30 n.80 (citing CARB ISOR at V-7).
[84] *Id*. at 32-33.
[85] American Lung Association, EPA-HQ-OAR-2023-0153-0026 (citing https://www.lung.org/sota). EPA notes that the cited website now displays the American Lung Association's April 2024 report, but that the reflected data continues to match the commenter's statement.
[86] Earthjustice et al., EPA-HQ-OAR-2023-0153-0044.
[87] Ocean Conservancy, EPA-HQ-OAR-2023-0153-0033.

EPA also received comments that questioned whether CARB had adequately demonstrated the need for the 2022 CHC Amendments. Two commenters claimed flaws in CARB's emission inventory, calling for third-party verification.[88] Other commenters went further to question the towing vessel inventory used by CARB, claiming that the count was too high. Two such commenters cited an independent study by Ramboll that had reduced inventory based on automatic identification system ("AIS") data.[89] These commenters claimed that this data showed that "non-reporting" vessels account for a smaller percentage of the total operating hours assumed by CARB. Another two commenters cited their own data for inventory discrepancies.[90]

As discussed in Section III.A, CARB notes that while "AIS is generally a good indicator of where vessels operate," it contains various discrepancies, errors, and lacks the specificity needed to provide the basis for rulemaking. [91] Instead, CARB primarily relied on the legally-mandated U.S. Coast Guard database of vessel registration, which it identified as the best available data, "particularly when compared with a useful but not error-free AIS system," and barring "an ongoing systematic reason to register vessels in California before moving them out of state."[92] Going forward, CARB states that it will continue outreach efforts to increase direct activity reporting from vessel owners, which together with registration data provides "by far the best sources available for non-reported vessels."[93]

Based on a review of the authorization record, the opponents have not demonstrated that California no longer has a need for its nonroad emission program, including its 2022 CHC

[88] Island Packers; Kirby Offshore Marine LLC.
[89] AWO; Curtin Maritime.
[90] Kirby Offshore Marine LLC; Westar Marine Services.
[91] CARB Final Statement of Reasons ("FSOR") at 225.
[92] *Id.* at 226.
[93] *Id.*

Amendments. As noted above, CARB discussed California's severe air quality conditions at length, and showed how CHCs contribute to these issues. Opponents to the authorization did not meet their burden to show how CARB's analysis of the need for its standards to meet these compelling and extraordinary conditions was insufficient.

CARB's submission and EPA's evaluation of the second authorization criterion at section 209(e)(2)(A)(ii) plainly demonstrates the criterion is met. CARB's Board Resolution and its authorization request plainly sets forth its basis to demonstrate the need for its nonroad emission program to meet compelling and extraordinary conditions under the second authorization criterion.

CARB has repeatedly demonstrated the need for its nonroad engines and vehicles emissions program to address compelling and extraordinary conditions throughout the state of California, including in its nonattainment areas as well as in local communities affected by the 2022 CHC Amendments. The opponents of the waiver have not adequately demonstrated that California does not need its nonroad emissions program to meet compelling and extraordinary conditions. Therefore, EPA determines that it cannot deny the authorization requests under section 209(e)(2)(A)(ii). Accordingly, for the reasons stated above, EPA cannot find that California does not need the 2022 CHC Amendments to meet compelling and extraordinary conditions. In addition, to the extent the alternative interpretation were to apply, for the reasons noted above, EPA cannot find that California does not need the standards contained in the 2022 CHC Amendments on their own are not needed to meet compelling and extraordinary conditions and thus cannot deny CARB's request for authorization based on this criterion under section 209(e)(2)(A)(ii).The opponents of the waiver have not adequately demonstrated that California does not need its nonroad emissions program to meet compelling and extraordinary conditions.

Therefore, EPA determines that it cannot deny the authorization requests under section 209(e)(2)(A)(ii).

C. Third Authorization Criterion

CAA section 209(e)(2)(A)(iii) instructs that EPA cannot grant an authorization if California's standards and enforcement procedures are not consistent with "this section." As noted above, EPA's 1994 rule sets forth, among other things, regulations providing the criteria, as found in section 209(e)(2)(A), which EPA must consider before granting any California authorization request for new nonroad engine or vehicle emission standards.[94] EPA has traditionally interpreted the section 209(e)(2)(A)(iii) "consistency" inquiry to require that California standards and enforcement procedures be consistent with section 209(a), section 209(e)(1), and section 209(b)(1)(C) (as EPA has interpreted that subsection in the context of section 209(b) motor vehicle waivers).[95] This section provides information for each element of the third authorization criterion for the 2022 CHC Amendments.

1. Consistency with CAA Section 209(a)

To be consistent with CAA section 209(a), the 2022 CHC Amendments must not apply to new motor vehicles or new motor vehicle engines. This is the case here. The 2022 CHC Amendments expressly apply only to nonroad engines and do not apply to motor vehicles or engines used in motor vehicles as defined by CAA section 216(2). In its CHC Authorization Support Document, CARB stated that the 2022 CHC Amendments are consistent with section 209(a) because "[n]either the propulsion nor the auxiliary engines covered by 2022 CHC Amendments are preempted under section 209(a) because they are neither new motor vehicles nor new motor vehicle engines, and clearly fall within the definition of nonroad engine

[94] See 40 CFR part 1074.
[95] 59 FR at 36982-83.

established by Congress."[96] We received one comment on this issue, which was supportive.[97] We did not receive any comments in opposition to the authorization based on this criterion. Therefore, EPA cannot deny California's request on the basis that California's 2022 CHC Amendments are not consistent with CAA section 209(a).

2. Consistency with CAA Section 209(e)(1)

To be consistent with CAA section 209(e)(1), the 2022 CHC Amendments must not affect new farm or construction equipment or vehicles that are below 175 horsepower or new locomotives or new engines used in locomotives. In its Authorization Support Document, CARB stated that the 2022 CHC Amendments "do not establish any emissions standards or other emissions related requirements for locomotives, locomotive engines, or to farm or construction equipment of any power size and are therefore not inconsistent with section 209(e)(1)."[98] We received one comment on this issue, which was supportive.[99] EPA did not receive any adverse comments regarding California's consistency with CAA section 209(e)(1). Therefore, EPA cannot deny California's request on the basis that California's 2022 CHC Amendments are not consistent with section 209(e)(1).

3. Consistency with CAA Section 209(B)(1)(C)

a. Historical Context

As explained above, EPA has historically interpreted the 209(e)(2)(A)(iii) consistency requirement to mean that California's standards must be consistent with CAA section 209(b)(1)(C) and therefore consistent with CAA section 202(a). Under CAA section 209(b)(1)(C), EPA must grant California's waiver (or authorization) request unless the Agency

[96] CHC Authorization Support Document at 33 (citations omitted).
[97] Earthjustice et al. at 15-16.
[98] Clean Air Act § 209(e)(2); CARB CHC Authorization Support Document at 33-34.
[99] Earthjustice et al. at 15-16.

finds that California standards and accompanying enforcement procedures are "not consistent" with CAA section 202(a). CAA section 202(a)(2) specifies that standards are to "take effect after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period." EPA has long limited its evaluation of whether California's standards are consistent with CAA section 202(a) to determining if: (1) There is inadequate lead time to permit the development of the necessary technology giving appropriate consideration to the cost of compliance within that time period; or whether (2) California and Federal test procedures are incompatible so that a single vehicle could not be subjected to both tests. EPA has also explained that "the import of section 209(b) is not that California and Federal standards be identical, but that the Administrator not grant a waiver of Federal preemption where compliance with the California standards is not technologically feasible within available lead time."

We often refer to the first element by the shorthand of "technological feasibility." The scope of EPA's review of whether California's action is consistent with CAA section 202(a) is narrow. The determination is limited to whether those opposed to the authorization have met their burden of establishing that California's standards are technologically infeasible, or that California's test procedures impose requirements inconsistent with the Federal test procedures.[100]

Further, EPA's review is limited to the record on feasibility of the technology. Therefore, EPA's review is narrow and does not extend to, for example, whether the regulations under review are the most effective, whether the technology incentivized by California's regulations are the best policy choice, whether EPA has the authority under the CAA to set such standards (versus California's sovereign authority to set its standards), or whether better choices should be

[100] *MEMA I*, 627, F.2d at 1126.

evaluated. The Administrator has thus long explained that "questions concerning the effectiveness of the available technology are also within the category outside my permissible scope of inquiry," under CAA section 209(b)(1)(C).[101]

In determining whether there is inadequate lead time to permit the development of technology, EPA considers whether adequate technology is presently available or already in existence and in use. If technology is not presently available, EPA will consider whether California has provided adequate lead time for the development and application of necessary technology prior to the effective date of the standards for which a waiver is being sought.

Additionally, the D.C. Circuit has held that "[i]n the waiver context, section 202(a) relates in relevant part to technological feasibility and to federal certification requirements. The technological feasibility component of section 202(a) obligates California to allow sufficient lead time to permit manufacturers to develop and apply the necessary technology. The federal certification component ensures that the Federal and California test procedures do not impose inconsistent certification requirements. Neither the Court nor the agency has ever interpreted compliance with section 202(a) to require more."[102]

Regarding the costs portion of the technology feasibility analysis, when cost is at issue EPA evaluates the cost of developing and implementing control technology in the actual time provided by the California regulations. The D.C. Circuit has stated that compliance cost ''relates to the timing of a particular emission control regulation.''[103] That court, in *MEMA I*, opined that CAA section 202's cost of compliance concern, juxtaposed as it is with the requirement that the

[101] 41 FR 44209, 44210 (October 7, 1976); 47 FR 7306, 7310 (February 18, 1982) ("I am not empowered under the Act to consider the effectiveness of California's regulations, since Congress intended that California should be the judge of 'the best means to protect the health of its citizens and the public welfare.'" (internal citations omitted)).
[102] *Motor Equipment Manufacturers Association v. Nicols*, 143 F.3d 449 (D.C. Cir 1998).
[103] *MEMA I* at 1119.

Administrator provide the requisite lead time to allow technological developments, refers to the economic costs of motor vehicle emission standards and accompanying enforcement procedures.[104]

b. CARB's CHC Authorization Discussion of Section 209(B)(1)(C)

As noted above, CARB's 2022 CHC Amendments performance standards apply to new, newly-acquired, and in-use commercial harbor craft. The standards and compliance dates vary by vessel category and, in the case of existing vessels, engine model year. The new requirements rely on the use of EPA-certified Tier 4 (or Tier 3) engines equipped with a diesel particulate filter (DPF) and, for short-run ferries and excursion vessels, Zero-Emission and Advanced Technologies (ZEAT). To address the potential absence of certified DPFs for marine applications, the 2022 CHC Amendments include a set of compliance extensions; a vessel owner must apply for and receive approval for a compliance extension. Once an owner has exhausted the available compliance extensions, or December 31, 2034, at the latest, the owner will no longer be permitted to operate a non-compliant vessel in Regulated California Waters (RCW).

The 2022 CHC Amendments also include a renewable diesel fuel requirement and a methane emission limit.[105] CARB's renewable fuel requirement is an operational regulation not preempted by CAA section 209 and is therefore not before EPA in this authorization proceeding.[106] CARB's methane standard limits new engines fueled by gaseous or liquid fuels other than diesel fuel to not more than 1.0 grams methane/brake horsepower-hour.

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[104] *Id. See* S. Rep. No. 192, 89th Cong., 1st Sess. 5–8 (1965); H.R. Rep. No. 728 90th Cong., 1st Sess. 23 (1967), reprinted in U.S. Code Cong. & Admin. News 1967, p. 1938. It relates to the timing of a particular emission control regulation rather than to its social implications.

[105] Renewable diesel fuel regulation is at Cal. Code Regs, title 17, § 2299.5; methane requirement is at Cal. Code Regs, title 17, § 93118.5(e)(9)(A)(3).

[106] *See* 40 C.F.R. part 1074, app. A to subpart A ("EPA believes that states are not precluded under 42 U.S.C. 7543 from regulating the use and operation of nonroad engines, such as regulations on . . . sulfur limits on fuel . . . ."). Accordingly, CARB is not requesting a waiver for its fuel requirements. CARB CHC Authorization Request at 20

i. Requirements for New and Newly-Acquired Harbor Craft

The 2022 CHC Amendments set out requirements for new and newly-acquired harbor craft vessels.[107] Beginning January 1, 2023, these vessels

> may not be sold, offered for sale, leased, rented, or acquired unless each propulsion and auxiliary engine on the vessel meets performance standards that are equivalent in stringency to: (1) the most stringent federal marine engine standard (federal Tier 3 or Tier 4 marine standards) or California or federal offroad engine standards (California or federal Final Tier 4 off-road engine standards) that were in effect at the time any of the aforementioned actions occur and that are applicable to new engines with the same power ratings and displacements as the subject propulsion and auxiliary engines, and that (2) reflect the addition of a level 3 Verified Diesel Emission Control Strategy (VDECS), such as a verified diesel particulate filter (DPF).[108]

The requirements for new and newly-acquired vessels begin January 1, 2023.

CARB stated that:

> [t]he basic requirement for new engines in new CHC and new engines acquired for use in new or newly acquired in-use CHC to meet either the most stringent federal marine engine emission certification standards applicable … are (sic) clearly technologically feasible, since those requirements simply mirror EPA's Tier 3 and Tier 4 marine engine and California and federal Final Tier 4 off-road engine emission standards, and because EPA fully considered the technological feasibility and economic costs associated with each of those emission standards in its rulemakings promulgating those standards.[109]

CARB stated that more than 20 marine engines have been certified to federal Tier 4 marine standards. CARB also allows off-road Tier 4 Final engines to be used in marine applications provided that manufacturers/operators comply with the provisions of 40 CFR 1042.605. CARB stated that there is at least one company in the process of marinizing Tier 4 Final off-road engines in accordance with the requirements of 40 CFR 1042.605.[110]

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n.32 (citing CAA section 209(d); 62 FR 67733, 67736 (Dec. 30, 1997)). EPA is therefore not issuing an authorization for fuel requirements. EPA nonetheless agrees that CARB's fuel requirements are in-use operational controls not preempted by section 209.

[107] Cal. Code Regs, title 17, § 93118.5(e)(8) and (9).

[108] CHC Authorization Support Document at 4.

[109] *Id.* at 34-35 (citations omitted).

[110] *Id.* at 35 (citations omitted).

CARB also stated that the requirement that reflects the addition of a level 3 Verified Diesel Emission Control Strategy (VDECS) is also technically feasible. CARB "anticipates that the vast majority of vessel owners will comply with this requirement by purchasing and installing diesel particulate filters (DPFs) that have demonstrated the capability to reduce diesel particulate emissions by 85 percent (a level 3 Verified Diesel Emission Control Strategy (VDECS)) . . . ."[111] CARB notes that it has "not yet verified a level 3 VDECS intended for use on marine engines; however, it has issued . . . a level 2 plus VDECS for a DPF intended for use on marine engines."[112] CARB also stated that there are 4 different manufacturers working on certifying level 3 VDECS and it expects that additional manufacturers will be able to certify level 3 VDECS by the compliance deadline as they can modify their proven existing on-road, off-road, and stationary aftertreatment systems that have been in use since 2007.[113]

CARB states that

> [i]f no engines or aftertreatment devices needed to comply with the performance standards are available, vessel owners or operators must, before initiating construction of a vessel, submit information to CARB's Executive Officer explaining why the performance standards cannot be met. CARB's Executive Officer may approve requests to install engines meeting federal marine engine or CARB or federal off-road engine standards but that do not meet generally applicable performance standards if the information submitted and the exercise of good engineering judgment indicates that the applicable performance standards cannot be met. Engines granted exemptions under this provision are subject to the general in-use requirements.[114]

This means that, in the case of a new vessel, if no DPF is available when the vessel is being built, it should be designed to install one once a DPF becomes available. In the meantime, once the ship goes into service, it becomes an existing vessel with respect to the DPF requirement and

[111] *Id.* at 34-35 (citations omitted).
[112] *Id.* at 36 (citations omitted).
[113] *Id.* at 36-37.
[114] *Id.* at 4.

would be eligible for an E2 availability extension followed by a scheduling extension, if necessary.[115]

ii. In-use Harbor Craft, Other Than Commercial Fishing Vessels

The 2022 CHC Amendments set out requirements for in-use engines for all harbor craft.[116] The requirements apply to engines on an expanded set of vessels than were covered under CARB's existing CHC regulation. As established by California's 2008 CHC rule,[117] engines on ferries, excursion vessels, tugboats, towboats, barges, dredges, and crew and supply vessels were required to demonstrate compliance with Tier 2 or Tier 3 standards by specified compliance dates, based on the model years and hours of operation of the in-use engines used in such vessels. The 2022 CHC Amendments expand the categories of affected in-use CHC to include pilot vessels, push boats, workboats, research vessels, CPFVs, commercial fishing vessels, and temporary replacement vessels, as well as tank barges under 400 feet and 10,000 GT. The 2022 CHC Amendments require that each engine on regulated in-use vessels demonstrate compliance with the same performance standards applicable to engines on new vessels (equivalent in stringency to the most stringent federal marine engine standards (Tier 3 or Tier 4) or California or federal Tier 4 Final off-road standards applicable to new engines with the same power ratings and displacements as the subject propulsion and auxiliary engines, plus the addition of a level 3 verified DPF, by the specified compliance dates. CARB projected these requirements are feasible for the reasons described above.

In addition, there are several compliance extensions available to provide compliance flexibility for in-use vessels. These compliance extensions enhance the technical feasibility of

[115] *See* Section III.C.3 for discussion of compliance extensions.
[116] Cal. Code Regs, title 17, § 93118.5(e)(12).
[117] *See* 76 FR 77521 (Dec. 13, 2011).

the standards by providing more time for the technology to mature, while still providing an incentive for manufacturers to certify and make the engines and emissions control equipment available:

- First, "[t]wo-year, renewable compliance extensions are available if vessel owners or operators can demonstrate that no certified engines or DPFs are available to meet the in-use performance standards by specified compliance dates. If engines certified to the most stringent federal Tier 3 or Tier 4 marine engine standards or California or federal Tier 4 Final off-road standards are available, but DPFs are not available, vessel owners or operators must repower their in-use CHC with such engines by the applicable compliance dates to be eligible for an extension from the DPF requirement. If a DPF subsequently becomes available for the engine, the vessel owner or operator must install that DPF on the engine within six months of the DPF's availability or by the expiration of the compliance extension, whichever is sooner."[118] This is compliance extension E2.

- Second, "[o]wners or operators of all categories of in-use CHC are eligible for a limited number of compliance extensions if they demonstrate that: (1) no suitable engines (either federal Tier 3 or Tier 4 marine engines or California or federal Tier 4 Final off-road engines) or DPFs can physically fit within existing vessels without compromising the vessels' structural integrity or stability, and that replacing the in-use vessels with new compliant vessels equipped with compliant engines is not financially possible; or (2) needed vessel modifications will reduce passenger capacity by at least 25 percent, and will also result in increased operational emissions (i.e., a ferry operator may need to schedule more runs which may accordingly result in increased emissions).[119] This is compliance extension E3.

- Finally, "[o]wners or operators of all categories of in-use CHC are eligible for renewable, one-year extensions if they demonstrate that compliance delays are due to equipment manufacturer, installation, or inspection delays, including new vessel delays due to shipyard capacities, multiple engines on multiple vessels having the same compliance dates, or multiple engines on a single vessel having different compliance dates."[120] This is compliance extension E5.

The following summary table of the extensions was provided by CARB at a Technical Working Group Workshop:[121]

[118] *Id.* at 14-15.
[119] *Id.* at 15.
[120] *Id.* at 16.
[121] CARB, Overview of the Commercial Harbor Craft Regulation, Technical Working Group Workshop #1, April 24, 2024, https://ww2.arb.ca.gov/sites/default/files/2024-05/Overview%20of%20Regulation%20ADA.pdf, accessed December 18, 2024.

Table 1: Summary of Extensions

Type	Eligibility criteria	Application Window	Duration	Renewal
Infrastructure delays (E1)	Shore power, ZEAT vessels	≥ 9 months prior to compliance dates 9-12 months prior to extension expirations for renewals	1-year	1 renewal, not beyond 2034
No certified engines or DPFs (E2)	Demonstration of lack of certified engines/DPFs	9-12 months prior to compliance dates or extension expirations	2-year	Unlimited
CPFV Tier 3 (E3)	Demonstration of Tier 3 or better by December 31, 2024	By July 1, 2024	10-year	No renewal
Vessel replacement needed (E3)	Demonstration of financial difficulty	≥ 18 months prior to compliance dates 9-12 months prior to extension expirations for renewals	2-year	Ferry, CPFV, Excursion vessels: up to 8 years, not beyond 2034 Tier 3+ workboats: unlimited All other vessels: Up to 6 years, not beyond 2034
Limited operating hours (E4)	Tier 4, ≤2600 hours/year or 1300 in DACs, vessel replacement necessary for addition of DPF	9-12 months prior to compliance dates or extension expirations	2-year	Unlimited
Scheduling extension (E5)	Delays due to manufacturer or shipyard delay	Prior to compliance date	1-year	Unlimited

iii. New and In-use Commercial Fishing Vessels

The requirements in the 2022 CHC Amendments for engines on new and in-use commercial fishing vessels[122] are different from those described above. For existing commercial fishing vessels, boats that are equipped with pre-Tier 1 or Tier 1 federal marine engine standards or off-road engine standards must meet at least federal Tier 3 marine or California or federal Tier 3 off-road engine standards for a new engine of the same power rating and displacement as the preexisting in-use engines, with compliance dates between December 31, 2030, and December 31, 2032, depending on the model year of the original engine. In-use commercial fishing vessels equipped with in-use engines that meet Tier 2 federal marine engine standards or California or federal Tier 2 off-road engine standards are not required to replace those engines. Engines on new commercial fishing vessels must meet the most stringent marine standards (Tier 3 or Tier 4)

[122] Cal. Code Regs, title 17, § 93118.5(e)(13).

in effect on the date of engine acquisition. Both new and existing commercial fishing boats may be eligible for E5 compliance extensions.

According to CARB, these standards are technically feasible as compliant engines are readily available and no aftertreatment is required for in-use commercial fishing vessels.

iv. Requirements for New, Newly-Acquired, and In-use Short Run Ferries and New and Newly-Acquired Excursion Vessels

The 2022 CHC Amendments include additional requirements for new, newly-acquired, and in-use short run ferries and new and newly-acquired excursion vessels.[123] These standards are based on Zero-Emission Advanced Technologies ("ZEAT"), which is defined as a propulsion system, auxiliary power system, or vessel utilizing a zero-emission propulsion and auxiliary power system that has no tailpipe exhaust emissions other than water vapor or diatomic nitrogen from the onboard source(s) of power. Under the amendments, beginning December 31, 2025, new, newly-acquired, and in-use short-run ferries must be equipped with zero-emission technologies. Beginning December 31, 2024, new and newly-acquired excursion vessels must be equipped with zero-emission capable hybrid technology that covers a minimum of 30 percent of the combined power generated from main propulsion and auxiliary engines, when averaged over a calendar year. Any internal combustion engines on these vessels must meet the performance standards applicable to new harbor craft discussed above.

In addition, the amendments require that vessel owners and operators must purchase, install, and maintain infrastructure needed to power ZEAT vessels.[124] Owners and operators of facilities where ZEAT vessels moor or dock are required to allow the installation of charging or fueling infrastructure needed to power such vessels and must additionally cooperate with ZEAT

[123] Cal. Code Regs, title 17, § 93118.5(e)(10).
[124] Cal. Code Regs, title 17, § 93118.5(i).

vessel owners regarding surveying, permitting, construction, installation, and maintenance of requisite charging or fueling infrastructure. There is a specific compliance extension for ZEAT infrastructure delays (E1).

CARB states that "[t]he technologies needed to meet the ZEAT requirements are commercially available," and gives specific examples of excursion and ferry vessels currently operating in RCW that are equipped with the technology.[125]

v. Additional Compliance Flexibility: Alternative Control of Emissions (ACE)

CARB included an alternative control of emissions (ACE) plan as an additional pathway to compliance. These plans are created by the owners and are approved on a case-by-case basis. CARB specifies that "[s]uch alternative strategies can include proposals such as engine modifications, exhaust after-treatment controls, engine repowers, engine rebuild to more stringent standards, or fleet averaging. CHC owners or operators electing to utilize this option must demonstrate that proposed ACE plan will achieve reductions of PM and NOx emissions that are at least equivalent to the reductions of PM and NOx emissions that would otherwise occur if they were to comply with the primary emission requirements from the time period beginning January 1, 2023 through December 31, 2034" and considering maximum allowable extensions.[126] CARB states that ACE enhances the feasibility of the program by allowing for innovative compliance strategies.

vi. Test Procedure Consistency

CARB states that

> [n]o issue regarding test procedure inconsistency between federal and California test procedures exists. The compliance methods do not alter the test procedures specified for certifying federal Tier 3 or 4 new marine engines or federal Tier 4 Final nonroad engines. In addition, there are no conflicts between federal and California test

[125] *Id.* at 37-38.
[126] *Id.* at 17-18.

> procedures for verification testing for diesel emission control strategies in that there is no comparable mandatory federal program. Therefore, the Administrator cannot find that the California requirements are inconsistent with CAA section 209. To the extent that the compliance methods apply to in-use modifications to existing engines, they are not inconsistent with federal test procedures simply because EPA does not have any comparable in-use standards and test procedures and lacks the authority to adopt such requirements.[127]

c. Comments Received

i. Technology Available for Compliant Engines/Aftertreatment Systems

EPA received comments on the availability of technology to meet the standards set in the CHC 2022 Amendments.[128] These comments were applicable to a wide range of vessel types, including tugboats, towing vessels, articulated tug barges, pilot boats, and passenger vessels. These commenters stated that no DPFs are currently commercially available and approved for use in marine applications. Some commenters expressed concern about the limited availability of EPA certified Tier 4 engines and aftermarket DPF for their vessels. One commenter stated that there are no Tier 4 marine engines available with less than 600 kW of power.[129] One commenter that operates pilot vessels stated that their vessels have unique operating requirements, and that limited technology exists that would allow them to meet the requirements of the CHC amendments.[130] The commenter also said that this technology is new to the market and still needs development time.[131] This commenter did not provide technical reasons for their statements. Another commenter said that use of DPFs on vessels on Lake Tahoe would put larger

[127] *Id.* at 41-42.
[128] AWO; Centerline Logistics Corporation ("Centerline Logistics-2"), EPA-HQ-OAR-2023-0153-0046; Curtin Maritime; Westar Marine Services; Jacobsen Pilot Service, Inc., EPA-HQ-OAR-2023-0153-0030; All American Marine, Inc., EPA-HQ-OAR-2023-0153-0019; Passenger Vessel Association ("PVA-1"), EPA-HQ-OAR-2023-0153-0015; Passenger Vessel Association ("PVA-2"), EPA-HQ-OAR-2023-0153-0048.
[129] North Tahoe Cruises of California ("North Tahoe Cruises"), EPA-HQ-OAR-2023-0153-0057.
[130] San Francisco Bar Pilots Association, EPA-HQ-OAR-2023-0153-0045.
[131] *Id.*

stress on the engines because of high altitude operating conditions and would force the engine to work harder and use more fuel.

An engine manufacturers organization stated that no engine manufacturers are planning on producing Tier 4+ commercial marine engines by the applicable compliance dates and that there are no Level 3 DPFs available or approved for use in CHCs.[132]

This issue is about the availability of technology required to meet the revised harbor craft standards for new and in-use vessels. The revised standards are performance standards that are expected to be achieved through the use of EPA Tier 3 or Tier 4 engines with an added DPF (except for short-run ferries and excursion vessels; see Sections III.C.3.3). The applicable EPA tier and the compliance dates depend on the type and size of the engine.

CARB stated in their authorization request that no new existing technology needs to be created to meet the requirements in the CHC amendments; rather, available technology only needs to be adapted for marine applications. CARB stated that marine Tier 3 and Tier 4 engines and Tier 4 off-road engines already exist and are certified, so they are therefore technologically feasible as propulsion units on CHC. CARB cited several engines currently available over 600 kW[133] and indicated that additional Tier 4 engines would become available in the near future. CARB also noted that though "only a few Tier 4 engines rated below 600 kW" are in operation due to a lack of EPA requirements for this size of engine to meet Tier 4 standards, "some marine diesel engines rated under 600 kW have been certified to meet Tier 4 standards," including down to 441 kW.[134]

[132] EMA.
[133] CARB ISOR at Appendix E at E-40.
[134] *Id.* at E-40–41.

For the PM performance standards, CARB stated in their authorization request that most owners will comply by using DPFs. CARB acknowledges that no Level 3 DPFs were currently on the market at the time the rulemaking was published but cited several emissions equipment Original Equipment Manufacturers ("OEMs") that are in the process of receiving approval for their systems. CARB demonstrated in Appendix E of the ISOR that OEMs are planning to manufacture the required technology for vessels to comply with the amendments, including a number of European manufacturers. Appendix E of the ISOR contains a list of aftertreatment OEMs currently pursuing CARB Level 3 Marine DPF Verification. For the issue of development time for new aftertreatment systems, CARB cited the robustness of their verification program in their authorization request. CARB discussed the requirements for its verification process which include durability requirements, compatibility with intended applications, lack of defects, and requirement to achieve the desired emissions reductions.[135]

CARB included provisions to provide compliance extensions for technology availability both for DPFs and Tier 4 engines if the required technology has not been approved by the timeline in the CHC amendments. These extensions, which are unlimited, will allow additional time for this technology to become available.

CARB acknowledged a fuel penalty associated with operating a DPF, which they estimated to be about 4.15 percent[136] and will lead to additional CO2 emissions. But CARB noted that "GHG reductions would occur from zero-emission vessels since GHG produced by the electrical grid are approximately 65 percent lower than those produced from burning fuel in vessel auxiliary engines for the same electrical power," and "emissions reductions would

[135] CARB CHC Authorization Request at 36 (noting that manufacturers are required "to warrant that their strategies are free from defects in design, materials, workmanship, and that operation of their strategies will achieve the emission reduction levels their strategies were verified to achieve").
[136] CARB Standardized Regulatory Impact Assessment Released July 7, 2021 ("CARB SRIA"), p. A-13.

continue to increase as more vessels upgrade their engines to cleaner tiers, install DPFs, and utilize ZEAT that are available for short-run ferries and excursion vessels."[137]

The commenters did not meet their burden of showing that the 2022 CHC Amendments are not technologically feasible, especially given the availability of unlimited extensions where a certified engine/DPF is not available (E2). We agree with CARB that Tier 4 certified engines are available, including below 600 kW, and note that some models have DPF technology incorporated in their design. We also agree with CARB that DPF technology is well understood for land-based applications such as highway trucks and some nonroad applications. Our 2008 marine diesel engine rule anticipated that the Tier 4 PM standards would be met through the use of DPF technology,[138] although engine manufacturers found other ways to meet the standards, so most EPA-certified marine diesel engines do not have that technology. While an assessment of DPF technology for marine applications is less certain, it is also the case that the CARB program includes unlimited compliance date extensions that are available if DPFs do not become available. EPA notes that these extensions account for the physical applicability of DPF to vessels, which in turn accounts for characteristics of certain vessels, such as the pilot vessels mentioned by a commenter, that may limit the ability to install this technology. Regarding use on certain vessels such as those at higher altitudes, EPA's consideration is limited to whether or not technology is feasible; we defer to CARB on policy decisions concerning the operation of that feasible technology in the context of its program.

[137] *Id.* at 42.
[138] 73 FR 37096, 37134 (June 30, 2008).

ii. Feasibility of Installing Required Technology on a Vessel

EPA received comments that retrofitting the required equipment onto in-use vessels is infeasible.[139] The reasons given include (1) no space onboard for the aftertreatment and DPFs; (2) retrofitting would require significant vessel reconfiguration, including dismantling the engine room and stack; and (3) retrofitting would put the engine out of compliance with EPA standards. The commenters provided general statements and did not provide detailed technical reasons for their statements. Several commenters noted that the CARB technology feasibility study showed that retrofits are not feasible for many tugboats.

This issue is about the feasibility of installing the required technology required on a CHC vessel. Marine engines equipped with aftertreatment such as SCR and DPF systems are larger and heavier than traditional engines without aftertreatment. For new vessels, the vessel can be designed to incorporate the larger power package. Even if a DPF is not available at the time of the vessel build, and an extension is received until a DPF system is available, the vessel design can factor in the later installation of a DPF system.

A bigger challenge is for in-use vessels that were not originally designed to incorporate a Tier 4 engine and a DPF. California requires that "in situations where engines certified to current Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road standards are available but DPFs are not available, a person must repower the vessel's engines with an available Tier 3 marine, Tier 4 marine, or Tier 4 Final off-road engine by applicable compliance dates to receive an extension for DPFs . . . The person must retrofit the vessel with a DPF within six months after a DPF

[139] AMNAV Maritime, EPA-HQ-OAR-2023-0153-0047; Baydelta Maritime-1, EPA-HQ-OAR-2023-0153-0011; Brusco Tug & Barge, public hearing testimony, EPA-HQ-OAR-2023-0153-0029; Centerline Logistics-2; Curtin Maritime Corp.; Kirby; Seabulk, EPA-HQ-OAR-2023-0153-0036; Shaver Transportation Company. EPA-HQ-OAR-2023-0153-0042; Vane Brothers-1; Vane Brothers-2; AWO; PVA-2; San Diego Working Waterfront, EPA-HQ-OAR-2023-0153-0034.

becomes available for the engine installed on the vessel or by the expiration date of the last compliance extension granted, whichever is sooner."[140] CARB does make extensions available if demonstrated that no suitable engines or control technologies could be safely installed in the vessel and purchasing a replacement vessel with compliant engines would not be financially feasible. However, there is a time limitation for these extensions, after which the vessel would need to be removed from service in California.

In its authorization request, CARB stated that owners can make use of extensions for engine and DPF availability (E2), financial hardship for vessel repower/replacement (E3), low operating hours (E4), or scheduling issues (E5) to increase flexibility in complying with the new standards. These extensions can be used to address retrofitting equipment, replacement of a vessel, or scheduling delays. If technology is not feasible in any particular vessel, such as in tugboats, CARB's program allows owners and operators of such vessels to comply through use of extensions. For explanation of what EPA is not acting on in this decision, see Section V.

iii. Timeline/Extensions

Commenters claimed that the 2022 CHC Amendments compliance timeframe is inadequate for repowering or retrofitting compliance technology on an existing vessel and, specifically, that it takes more than six months to install the relevant equipment once it is developed.[141] These commenters note that affected vessels are individual, purpose-built boats, and the retrofit must be tailored for each one individually. Once the technology is available, it can take two years to prepare the design changes; additional years to source/procure the required

[140] CARB CHC Authorization Support Document at 14-15.

[141] AMNAV; Baydelta Maritime-1; International Organization of Masters, Mates & Pilots, Marine Engineers Beneficial Association, and Inlandboatmen's Union ("IOMMP et al."), EPA-HQ-OAR-2023-0153-0037; Kirby; AWO; R.E. Staite Engineering, Inc. ("Staite"), EPA-HQ-OAR-2023-0153-0039; Vane Brothers-1; Vane Brothers-2; EMA; Seabulk.

engine and compatible auxiliary engine; up to two years for U.S. Coast Guard (USCG) and classification society review; and 18 months to install the equipment, subject to shipyard availability. Scheduling is also affected by supply chain concerns. Commenters noted that any time out of the water is time when the vessel cannot generate revenue, and the process is further complicated for owners with several vessels that must be modified, especially if they are not sister boats.

These commenters referred to the requirement to install a Tier 3 or Tier 4 engine, depending on vessel type and size, equipped with a DPF.[142] Recognizing that DPFs are not yet widely available for marine vessels, CARB included a compliance extension that provides additional time (granted at two-year intervals),[143] provided the owner repowers with the cleanest technology engine and installs a DPF within six months after one becomes available. There is an additional compliance extension available for scheduling issues connected with the 6-month installation requirement (E5); this extension can be renewed indefinitely. To the extent an installation itself will take longer than six months, which we agree with commenters is a strong possibility, EPA expects the E5 extension will likewise apply, allowing the time needed beyond the basic six months allotted. Alternatively, compliance extension E3 is available if the owner cannot repower the boat or install DPF and the owner cannot afford a vessel replacement. This extension provides additional time during which the owner can continue operating the vessel by extending the ultimate compliance deadline.

EPA also received comment on an additional compliance extension provision for commercial passenger fishing vessels, which are eligible for a one-time 10-year compliance

[142] Cal. Code Regs, title 17, § 93118.5(e)(10), (11), and (12).
[143] Cal. Code Regs, title 17, § 93118.5(e)(12)(E2).

exemption if engines or DPF are not feasible and the owner cannot afford vessel replacement.[144] To qualify, among other things the boat must have a Tier 3 engine. Commenters objected to the reasons CARB provided to support the extension, reasoning that the same should apply to other vessel types, and because these vessels constitute 40% of California's CHC fleet but would not bear their share of the burden to reduce emissions from this sector. Several commenters said that not extending this compliance to all similarly-situated vessels is arbitrary and capricious.

As noted above, EPA applies a preponderance standard to the evidence presented by CARB and opponents,[145] and its consideration is strictly limited to the criteria prescribed in CAA section 209(e). Policy considerations beyond the statute's terms are beyond the scope of this review. Under the appropriate standard, the commenters failed to provide material evidence that undermines CARB's reasoned decision to extend additional flexibility to commercial fishing vessels.[146] CARB developed an alternative compliance extension for these vessels to ensure existing boats reduce their emissions based on their analysis of available data. Commenters did not provide evidence to show how this policy decision undermines lead time and feasibility of the standards. While EPA acknowledges that some commenters believe CARB's differential treatment of different sectors is unfair and arbitrary, the Clean Air Act does not authorize EPA to apply judgement as to which sectors CARB chooses to prioritize in its regulation.

iv. Extension Process

Commenters claimed that the process for applying for and receiving compliance extensions is too time consuming, burdensome, and costly, due to the amount of information needed and also because the application and accompanying analysis would need to be provided

[144] Cal. Code Regs, title 17, § 93118.5(e)(12)(E)(3).
[145] *MEMA I*, 627 F.2d at 1122.
[146] Even if EPA applied the arbitrary and capricious standard to this issue, EPA would find that CARB provided a reasonable basis for its decision.

for each vessel. [147] In addition, commenters allege CARB did not propose standards to judge the criteria for the extensions making approval subjective and uncertain.

While it may be time consuming for owners to assemble the required information, CARB has determined that the information is necessary to determine if a compliance extension is warranted for each case. The overall goal is to provide flexibility while encouraging manufacturers to develop and certify the required emission control devices. EPA defers to CARB's judgment on how much information is necessary to vindicate the program's emission control goals while ensuring a reasonable process for applicants. In its 2007 CHC FSOR, CARB included a one-year extension, renewable annually, which it found to satisfy any circumstance where no suitable engine was available for a specific vessel while providing accountability without being burdensome to the company.[148] EPA acknowledged these compliance extensions while noting that "[CAA s]ection 202(a) does not allow EPA to conduct a more searching review of whether the costs are outweighed by the overall benefits of the California regulations."[149] Section 209(e)(2)(A)(iii), moreover, does not permit EPA to deny authorizations on the basis of the State allegedly requiring too much paperwork. Similarly, that section does not direct a certain amount of content required for CARB's use of extensions, leaving such criteria to CARB's judgment. Nonetheless, EPA does not consider the extensions to be so subjective as to be unreasonable, as they are based on a showing that, for instance, technology is unavailable or inappropriate for vessels, not on some undefined criteria. In any case, no commenter demonstrated that the process was so burdensome as to be infeasible.

[147] AWO; Brusco Tug & Barge; Centerline Logistics-2; Island Packers Cruises; Kirby; Staite.
[148] CARB 2007 CHC FSOR, EPA-HQ-OAR-2011-0549-0032 at 52–53.
[149] 76 FR at 77527. Further discussion of costs is found in Section III.C.3. of this document.

CARB took the costs of assembling this information into account in their Standardized Regulatory Impact Assessment, in which it estimated that the costs associated with the compliance extension requests would include $61,000, on average, for a Naval Architect Report and about $400 for a Financial Feasibility Report, and various other administrative costs.[150] These costs are associated with a compliance extension when the vessel owner/operator "demonstrate[s] that Tier 4 + DPF is not feasible on their vessel, and that purchasing a replacement vessel with compliant engines would not be financially feasible," consistent with an E3 extension (though CARB lists the section applicability as for "Compliance Extensions").[151] See Section III.C.3 of this document for discussion of costs of compliance.

v. Costs

EPA received comment from many types of vessel owners that the cost of complying with this program will put their companies out of business. These include operators of various kinds of tugs, passenger vessels, and pilot boats, as well as vessel manufacturers and industry associations. Some of these comments included financial information comparing the compliance costs to their annual revenue or profit.[152] Other commenters said their companies cannot absorb the costs of the program nor recoup those costs from their customers.[153] One commenter claimed that CARB's cost-benefit analysis does not support the required investment, especially if it is lost

[150] CARB SRIA at 93-94.
[151] *Id.* at 93.
[152] Staite ($6 million costs, 18% of their $33 million annual revenue); San Francisco Bar Pilots Association (commenting that they will be required to replace three vessels at $50 million each by December 31, 2025; the commenter further claims that this cost will be borne by its customers, who can choose to use other ports); Angel Island-Tiburon Ferry, EPA-HQ-OAR-2023-0153-0056 (comparing $4 million in cost to $800,000 annual gross revenue); Balboa Island Ferry, public hearing testimony, EPA-HQ-OAR-2023-0153-0029 (comparing $8 million in cost to $100,000 annual profit).
[153] All American Marine (stating that private vessel operators cannot absorb the costs); Brusco Tug & Barge (commenting that cost-benefit analysis does not support this investment and they cannot recoup the costs of the Tier 4 package); Crowley (declaring that the costs, $9.5 million per ATB, is not commercially feasible since it cannot be recovered through increased charter hire, and it makes no commercial sense).

or negated by a timeline that causes the premature demise of their fleet.[154] Additionally, another commenter who just repowered under the 2008 rule claims it is now facing the costs of an additional repower.[155] Commenters also noted that grant funding may not be available, either because these vessels may not qualify or that it may not be available in time.[156] Some commenters indicated that they represent small businesses, and the additional costs may force them to end operations in California.[157] Some of these commenters said CARB's costs are too low and are based on flawed data, although they did not provide detailed information on these claims.[158] Commenters further complained that costs for ferry operators are higher in part because the boats and equipment are required to be manufactured in America, although their costs may be offset by operating savings from ZEAT.[159]

CARB provided cost estimates for this program, for repowering with Tier 4 engines, retrofitting DPFs, and replacing vessels. CARB expects most vessels will replace their engines, with costs including $44,438 for commercial fishing vessels,[160] $684,332 for excursion vessels, and ranging up to $6,469,709 for catamaran ferry vessels, on a per-vessel basis.[161] CARB expects vessel operators also will be able to recover their compliance costs through increases in rates and fares.[162]

[154] Centerline Logistics Corporation ("Centerline Logistics-1"). EPA-HQ-OAR-2023-0153-0012.
[155] Red and White Fleet, public hearing testimony, EPA-HQ-OAR-2023-0153-0029 (they already repowered two boats to Tier 2 and now have to go to Tier 3, but their funding situation does not incentivize them to do that).
[156] See for example Angel Island-Tiburon Ferry, Island Packers Cruises, PVA-2, Red and White Fleet, Staite, North Tahoe Cruises, Green Yachts, public hearing testimony ("Green Yachts 1"), EPA-HQ-OAR-2023-0153-0029.
[157] Angel Island-Tiburon Ferry, Staite, Westar Maritime Services.
[158] AMNAV Maritime; Westar Marine Services; PVA-2.
[159] Green City Ferries, public hearing testimony, EPA-HQ-OAR-2023-0153-0029.
[160] EPA notes that the amendments impose a less-stringent requirement on commercial fishing vessels, as discussed in Section III.C.3 of this document.
[161] CARB CHC Authorization Support Document at 40.
[162] CARB FSOR at 40–41.

EPA approved CARB's 2008 rule that included mandatory repowers for many types of harbor craft.[163] CARB in that rule found, for instance, "that the average impact on business's [tugboat and towboat businesses] return on equity (ROE) was a decrease of 3.6 percent and 0.5 percent, respectively."[164] CARB further noted in that rule that this impact to profitability would be less whenever these businesses passed their costs on to customers, all the more likely for "a needed service that is not easily replaced."[165]

While the repower technology in the 2022 CHC Amendments is more complex, the cost recovery mechanisms remain analogous. Indeed, CARB "estimated that the maximum amortized compliance costs of the 2022 CHC Amendments on typical high-speed ferry, escort/ship-assist tugboat, and commercial fishing businesses would be 0.7 percent, 0.4 [percent], and 0.7 percent of the average annual revenue for businesses engaged in the same industries, respectively, and the projected increased rates for ferries and excursion vessels are modest."[166] And the compliance extensions will provide more time to boat owners to design plans to incorporate the engines and devices on their boats.

EPA has considered the factual record and found it to be supportive of a finding that CARB's 2022 CHC Amendments are technologically feasible within the lead time provided, giving appropriate consideration to cost. EPA finds the record to support a conclusion that costs are not excessive. EPA further finds that commenters have not carried their burden to undermine this conclusion. EPA notes that its duty under this section of the CAA is simply to consider the costs associated with CARB's regulations, even if such costs are not insignificant. EPA has

[163] 76 FR 77521 (Dec. 13, 2011)
[164] CARB 2007 CHC FSOR at 57–58.
[165] *Id.*
[166] CARB CHC Authorization Support Document at 41.

done. We believe that CARB has sufficiently considered costs and that those costs are reasonable and reasonably explained.[167]

It is CARB's responsibility to determine the best way to reduce emissions in its state, and EPA does not reevaluate California's policy decisions in deciding whether to grant authorization as long as the regulations can be met without making the costs prohibitive. Whether some operators may have difficulties with the cost of the program does not make the program infeasible.[168] As EPA has previously made clear, "[t]he issue of whether a proposed California requirement is likely to result in only marginal improvement in air quality not commensurate with its cost or is otherwise an arguably unwise exercise of regulatory power is not legally pertinent to [a] decision under section 209" of the CAA.[169]

CARB's 2022 CHC Amendments are designed and expected to result in the retrofit of existing engines, or the replacement of engines in existing vessels. There is lead time, supported by extensions, to accomplish this goal, and there is no evidence that costs are excessive or present an undue burden to owners and operators of regulated vessels. For any instance in which a retrofit or repower will not fit in a particular vessel, and replacing the vessel is not financially

[167] *ATA v. EPA*, 600 F.3d 624, 629 (D.C. Cir. 2010) ("In approving the California TRU rule, EPA adequately considered those costs. EPA explained that businesses can comply with the TRU rule for about $2,000 to $5,000 per unit. J.A. 584. EPA also determined that the phased implementation of the rule would help minimize its cost. Although the costs of the TRU rule are not insignificant, EPA's duty under this portion of the statute is simply to consider those costs. It did so here. EPA's conclusion — namely that California's rule was consistent with § 7521(a)(2) — was reasonable and reasonably explained.").

[168] EPA has previously stated that it is up to CARB to choose who it will regulate under its standards, even though such costs may impact various operators differently. *See* 78 FR 58090, 58119 (Sept. 20, 2013); 74 FR 3030 (Jan. 16, 2009), TRU Decision Document at 63.

[169] 36 FR 17458 (Aug. 31, 1971); *see also* 40 FR 23102, 23104 (May 28, 1975); Decision Document accompanying 58 FR 4166 (Jan. 7, 1993) at 20 ("Since a balancing of these . . . costs against the potential benefits from reduced emissions is a central policy decision [of CARB in adopting the regulation] I believe I am required to give very substantial deference to California's judgments on this score.").

possible, CARB provides the E3 extension to delay application of the standards to that vessel such that the vessel replacement costs would not be incurred.[170]

Likewise, there is no evidence in the record to show that the incremental cost of CARB's requirements for new vessels is unreasonable for manufacturers, the regulated party for such vessels.[171] Though no "level 3 VDECS that is intended for use on marine engines" has been verified at the time of CARB's authorization request, CARB notes two manufacturers have accumulated substantial demonstration data and are well on their way to certification.[172] It also notes that "other manufacturers will likely be incentivized to also obtain verification of Level 3 VDECS . . . by modifying existing on-road, off-road, or stationary application DPFs" to operate in marine vessel conditions.[173]

CARB accounts for the cost of adapting existing nonroad DPF and nonroad engines to marine applications. In its analysis, CARB expected a certain amount of vessel turnover in each category of the fleet. This turnover, for which owners/operators would purchase new vessels, was then accounted in CARB's overall cost analysis, both in total for each year of compliance, and by vessel category/business. Opponents to the authorization did not in turn present evidence to show that the incremental cost of a new vessel utilizing equipment compliant with the 2022

[170] A vessel owner or operator is not eligible for the E3 extension where a compliant engine and/or DPF can be installed in the vessel. Alternately, EPA notes that any owner/operator may choose to comply through the purchase of a new compliant vessel in lieu of retrofit/repower.

[171] EPA notes that CAA section 202's cost of compliance relates to the timing of particular emission control regulation. See, e.g., *MEMA I*, 627 F.2d at 1118 ("Section 202's "cost of compliance" concern, juxtaposed as it is with the requirement that the Administrator provide the requisite lead time to allow technological developments, refers to the economic costs of motor vehicle emission standards and accompanying enforcement procedures. *See* S. Rep. No. 192, 89th Cong., 1st Sess. 5-8 (1965); H.R. Rep. No. 728, 90th Cong., 1st Sess. 23 (1967), U.S. Code Cong. Admin. News 1967, p. 1938. It relates to the timing of a particular emission control regulation rather than to its social implications. Congress wanted to avoid undue economic disruption in the automotive manufacturing industry and also sought to avoid doubling or tripling the cost of motor vehicles to purchasers. It therefore requires that emission regulations be technologically feasible within economic parameters. Therein lies the intent of the "cost of compliance" requirement.").

[172] CARB CHC Authorization Support Document at 36–37.

[173] *Id.* at 37.

CHC Amendments was excessive compared to vessels built with existing equipment. EPA therefore finds that CARB reasonably considered the costs of development and application of the requisite technology, and we cannot find that the incremental costs associated with manufacturing compliant CHC vessels are excessive.

EPA is not acting on the 2022 CHC Amendments in regard to the standards for in-use engines and vessels (excluding commercial fishing vessels) that would apply after the expiration of the feasibility extensions where an engine or DPF is not feasible and the owner cannot afford vessel replacement (E3). Commenters' concerns about the cost to acquire replacement vessels are therefore beyond the scope of EPA's decision.

vi. Safety-related Issues

EPA received comments on safety aspects of the equipment required by the 2022 CHC Amendments, including impacts on vessel stability and potential damage to the equipment or personnel caused by technology that has not yet been approved for marine use, putting passengers, crew, and cargo at risk.[174] Much of the concern is about active DPF regeneration, which commenters claim can damage the engine and make the vessel unsafe to operate. They also state that its use can lead to engine room fires, which are more dangerous for boats than for trucks because boats cannot pull over to the side of the road. Active regeneration is required, they say, because passive regeneration requires high engine load to generate heat, which most towing vessels cannot provide. Commenters were concerned that retrofitting could adversely affect vessel stability and affect the safe operation and functionality of the vessel. Commenters

[174] AWO; Baydelta Maritime-1, Baydelta Maritime-2 (EPA-HQ-OAR-2023-0153-0049); Centerline Logistics-2; Curtin Maritime; Kirby; PVA-2; San Francisco Bar Pilots Association; Seabulk; Shaver Transportation Company; Vane Brothers-1; Vane Brothers-2; Brusco Tug & Barge.

also expressed concern that the CARB validation process is inadequate to demonstrate reliability, durability, and safety, and noted that EPA's commercial engine validation is more demanding.

EPA notes that to the extent safety is relevant to EPA's authorization criteria at all, commenters failed to meet their burden through their general statements, lacking in detailed technical reasons or justifications. Also, while these statements refer to retrofitting technology, they ignore that the technology can be incorporated into a new vessel through its initial ship design. CARB noted that their program does not supersede USCG safety requirements in Title 46 of the CFR, and that although USCG will "not have a direct role in implementing the amendments [they] will need to verify that [the equipment is] properly installed . . . ."[175] Ultimately, vessel modifications will need to be approved by USCG and the ship's relevant classification society for all aspects of design and safety including stability, trim characteristics, buoyancy, structural design limits, fire protection requirements, and engine exhaust pipe and engine exhaust cooling requirements.[176] EPA believes that the approval of USCG—an expert Federal agency charged by Congress with ensuring ship safety—is sufficient to avoid unreasonable safety risks, including to address any potential issues with active DPF regeneration. Commenters failed to articulate any detailed explanation as to why the USCG safety requirements were insufficient in this context. EPA recognizes that CARB developed its amendments in coordination with USCG and has updated its planned implementation in response to input.[177] In any event, any such concerns may be better directed to USCG.

[175] CARB FSOR at 47 and 271.
[176] *Id.*
[177] *See, e.g.,* CARB E.O. DE-24-003, available at https://ww2.arb.ca.gov/sites/default/files/2024-09/Executive%20Order%20for%20Bypass%20Systems%20on%20VDECS%20for%20CHC%20-%20Final.pdf (last visited December 19, 2024).

In addition, even beyond USCG's safety process, CARB's process for DPF verification includes durability requirements, compatibility with intended applications, and a demonstration that there are no defects, and that the device will achieve the desired emissions reductions. CAA section 209(e)(2)(A)(iii) does not require CARB's enforcement procedures to be identical to EPA's procedures, only that they are consistent, which we interpret to mean that a manufacturer can comply with both procedures with one vessel. EPA believes CARB has reasonably explained its procedures, and these procedures avoid unreasonable safety risks.

vii. Vessel Categories

As noted above, CARB organized its CHC regulations according to various vessel categories, all of which are distinguished from strict ocean-going vessels that are regulated under other provisions.[178] Some commenters raised concerns that articulated tug-barges ("ATBs") are misclassified as ship assist tugboats even though they are substantially different and are operated more like ocean-going tanker vessels.[179] The tugs on these vessels are larger than ship-assist tugs, purpose-built for inter-port shipping and ocean transport rather than intra-port service. Commenters assert that these vessels perform most of their work offshore and compete with ocean-going tankers. They operate not only with California, but also to and from the Gulf of Mexico and other ports, as needed. As such, commenters claim they should be removed from the harbor craft rule.

As we explain above, the statute does not allow EPA to deny an authorization based on CARB's policy choices to prioritize regulation of certain vessel types over other vessel types. In any event, CARB did provide a reasoned explanation for its decision to categorize and regulate in this manner. CARB estimates that while tugs and barges make up approximately 1.2 percent

[178] CARB CHC Authorization Support Document at 14.
[179] Crowley; Curtin Maritime; Seabulk; Vane-Brothers-1; Vane Brothers-2.

of all harbor craft by population,[180] they contribute 10.1 percent of statewide diesel particulate matter emissions in 2023 due to their size, operating profile, and other patterns. CARB thus determined that it should subject these craft to the CHC regulations.

viii. Zero Emission and Advanced Technology ("ZEAT") Standards

Many commenters advocated for the benefit of incorporating ZEAT into CHC, and they cited zero emissions vessels currently operating in RCW to demonstrate its feasibility.[181] On the other hand, one commenter disputed the feasibility of ZEAT in CHC, including that there is a lack of zero emissions components and that USCG sea trials on a hydrogen-fueled vessel have not yet been completed.[182] Commenters also expressed concern that without industry standardization of ship-to-shore electrical connections, requirements for ZEAT are premature.[183]

In its authorization request, CARB addressed the ZEAT requirements by citing multiple zero-emissions or zero-emissions capable vessels presently operating in RCW.[184] CARB also cited the ongoing construction of a zero-emission tugboat. CARB stated that all cited vessels are using battery electric technology and expect that most vessels will use battery electric technology to meet the requirements, though CARB did note that hydrogen fuel cell technology for marine applications is not as mature as battery electric technology. CARB also noted that it is "open to reviewing ZEAT Credit or ACE Plan applications utilizing wind power and sailing strategies" as a means of compliance.[185] Furthermore, CARB stated that there are no issues with the technical

[180] CARB Response to Comments, Master Response 3121-3 (pp.278-9).
[181] E V Maritime, EPA-HQ-OAR-2023-0153-0059; Wind + Wing Technologies, Inc., EPA-HQ-OAR-2023-0153-0060; Ocean Conservancy; Green City Ferries; SWITCH Maritime, public hearing testimony, EPA-HQ-OAR-2023-0153-0029.
[182] Angel Island-Tiburon Ferry.
[183] EMA.
[184] CARB CHC Authorization Request at 37–38.
[185] CARB FSOR, p. 241. CARB caveats that "[s]ailboats in commercial operation often operate as excursion vessels and are subject to the 2022 Amendments if they do not meet the definition of "Ocean-going vessel" or "Recreational Vessel." *Id.* at 106.

feasibility of installing shore-based charging or power requirements. CARB notes that though no standard has been set for ship-to-shore electrical connections, functional connections do exist and will continue to develop, confirming that it is already technically possible to power or charge a ship from shore. In other words, given that companies are already purchasing, operating, and recharging ZEAT within California, ZEAT is already feasible—notwithstanding future market or regulatory developments that may further facilitate ZEAT deployment.

The ZEAT standards apply to new excursion vessels and new and in-use short-run ferries. CARB notes that "[o]wners and operators of other categories of vessels may also elect to use ZEAT."[186] It also states that "voluntary ZEAT deployment may be eligible for regulatory flexibility, such as additional compliance time on other vessels in the fleet, which would reduce costs during the implementation period of 2023 to 2038."[187]

Commenters discussed grant availability and limitations on such funding for retrofitting their vessels.[188] Several raised concerns regarding existing funding sources, such as the use of antiquated funding formulas that favor diesel-to-diesel conversions and ignore crew training that is crucial for the transition to electric propulsion; limited availability of funds to privately-held companies; insufficient support for micro businesses which require higher funding due to their limited equity reserves; funds being disbursed only at the end of the project; and exclusion of shoreside infrastructure. Commenters complained that whatever funding is available is insufficient to cover the entire California commercial harbor craft fleet, applications require an extensive amount of work, and grants require 20% matching funds. They claimed that grant funds through the Infrastructure Investment and Jobs Act, Diesel Emissions Reduction Act, and

[186] *Id.* at 109.
[187] CARB SRIA at 55.
[188] Angel Island-Tiburon Ferry; Green Yachts ("Green Yachts 2"), EPA-HQ-OAR-2023-0153-0058; Island Packers Cruises; North Tahoe Cruises; PVA-2; Red and White Fleet.

the Carl Moyer program are limited and highly competitive. Commenters also indicated the Carl Moyer program gives priority to projects whose emissions reductions exceed requirements or proceed in advance of regulatory deadlines. They were also concerned that California funding for marine zero-emission projects, such as demonstration in core funding, is being cut according to a "February 22 Legislative Analysis Office report" on the California 2023-2024 budget.[189]

CARB compiled and posted a list of available grants for CHC on their website.[190] However, CARB did not consider the availability of grants for any vessel types while considering the cost of the rule, and its cost analysis specifically states, "these costs do not account for the use of any public grants or air quality incentive funding, which has typically been widely used by the commercial fishing industry."[191]

CARB also suggested using compliance extensions, creating an alternative control of emissions (ACE) plan, or using ZEAT credits to increase owner flexibility for complying with the amendments. The E1 compliance extension provides up to two years additional time for shore power and ZEAT infrastructure delays.[192] The ACE plan allows fleets to use averaging or other fleet-proposed methods to achieve equivalent fleet emission reductions. ZEAT credits are also available for fleets to use in reducing their overall emissions.

EPA finds that technology exists to comply with the ZEAT standards. Battery-electric technology has been demonstrated to be feasible on several vessels operating in California,

[189] The cited report was mentioned in testimony. EPA cannot determine to what report the commenter referred and therefore cannot respond in detail to this comment.
[190] Funding Programs for Commercial Harborcraft, accessed December 18, 2024 at https://ww2.arb.ca.gov/sites/default/files/2020-09/funding09302020.pdf, accessed December 18, 2024.
[191] CARB CHC Authorization Support Document at 111.
[192] EPA notes that to the extent certain requirements apply to sources other than mobile sources (such as potentially the various registration and reporting requirements for facilities), those requirements may not be preempted by section 209 and thus may not require authorization. *See also* CAA section 116. To the extent authorization is required, EPA is authorizing the entire 2022 CHC Amendments, excepting certain in-use short-run ferry and extension expiration provisions, as noted in Section V. of this document.

including for installation and operation of the associated infrastructure. By contrast, commenters did not provide evidence to show that new vessels, whether short run ferries or excursion vessels, utilizing ZEAT present an excessive incremental cost or insufficient lead time over new vessels utilizing diesel or other non-ZEAT technology. Opponents therefore did not meet their burden to prove that CARB's amendments do not provide sufficient lead time considering cost of compliance. EPA is not acting on the ZEAT requirements for in-use short run ferries. Commenters' concerns over the cost of retrofit/replacement for short run ferries are therefore beyond the scope of EPA's decision.

ix. Test Procedures

One commenter expressed concerns with opacity testing for engines equipped with water-cooled marine exhaust. Because wet exhaust has less particulate matter than dry exhaust, they claim that the results of the test will not be accurate. Also, the commenter warns that the test could create hazardous conditions on the boat because the "rates of acceleration, speed, and distance required are not at all similar to real world operations." [193]

CARB addressed water-cooled exhaust by stating that the test procedure, which is adopted from SAE J1667, is to measure the opacity of the exhaust after the DPF (if equipped), but before the muffler or any seawater injection.[194] In any case, EPA's role under CAA section 209(e) with respect to test procedures is to determine whether CARB's procedures are inconsistent with federal test procedures. Since the commenter did not identify any test procedure concerns that would be inconsistent with federal test procedures, EPA cannot deny the authorization on that basis.

[193] Island Packers Cruises.
[194] CARB ISOR at III-19.

d. California's 2022 CHC Amendments Are Consistent with CAA Section 202(a)

After a review of the record, information, and comments received in this proceeding, EPA has determined that the opponents of the authorization request for CARB's 2022 CHC Amendments have not demonstrated that these regulations are inconsistent with CAA section 202(a).

As explained, CARB's authorization request establishes that control technology either presently exists or is technologically feasible but still under development for marine applications. To address technology that is still under development, CARB provides lead time, by application, for owners and operators through available extensions.[195] First, two-year, renewable compliance extensions are available if vessel owners or operators can demonstrate that no certified engines or DPFs are available to meet the performance standards by specified compliance dates (E2 extension). Second, owners or operators of all categories of in-use CHC are eligible for a limited number of compliance extensions if they demonstrate that no suitable engines or DPFs can physically fit within existing vessels without compromising the vessels' structural integrity, stability, or passenger capacity, and that replacing the in-use vessels with new compliant vessels equipped with compliant engines is not financially possible (E3 extension). In addition, the 2022 CHC Amendments provide flexibilities to account for equipment manufacturer delays or installation difficulties (E5 extension), or for infrastructure delays associated with shore power

[195] EPA evaluates the lead time associated with CARB's regulation by examining the date of CARB's adoption of the regulation and when regulated parties are required to meet the regulation. EPA is guided both by the amount of lead time provided and by the principles set forth in cases such as *Natural Resources Defense Council* and *International Harvester*. EPA finds no evidence in the record that vessel owners and operators are unable to comply with CARB's requirements that EPA is including in this authorization. Given the statutory scheme, the EPA Administrator is to give very substantial deference to California's judgments. *See Natural Resources Defense Council v. EPA,* 655 F.2d 318, 331 (D.C. Cir. 1981) ("Given this time frame [a 1980 decision on 1985 model year standards], we feel that there is substantial room for deference to the EPA's expertise in projecting the likely course of development."). *See also International Harvester v. Ruckelshaus*, 478 F 2d. 615, 640 (D.C. Cir. 1973) ("We are inclined to agree with the Administrator that as long as feasible technology permits the demand for new passenger automobiles to be generally met, the basic requirements of the Act would be satisfied, even though this might occasion fewer models and a more limited choice of engine types.").

for ZEAT vessels (E1 extension). Unlimited extensions are also available in cases of limited operating hours of an engine (E4 extension).

EPA agrees with CARB that these extensions ensure that lead time is sufficient for the development and application of the technology needed to comply with CARB's standards. Consistency with CAA section 209(B)(1)(C) requires that California provide lead time "necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period."[196] Under the E2 extension, in-use standards will not be effective against owners and operators unless required technology is certified and available for their vessel. Even then, the standards will still not be effective, under the E3 extension, while needed technology cannot be applied to the particular vessel and replacing the vessel is not financially possible. Given the relatively limited scope of CHC at issue, EPA finds this concept consistent with giving sufficient lead time. And as noted above, EPA gives substantial deference to the policy judgments California has made in adopting its regulations. Opponents have not met their burden to show that CARB's use of extensions for vessels' compliance dates is insufficient to provide the required lead time. Therefore, based on the record, EPA is granting CARB an authorization for the 2022 CHC Amendments as they apply to owners/operators of in-use vessels for the portion of the regulations applicable through the applicable extension time periods.

EPA is not acting on two aspects of the request: (1) requirement for vessel replacement at the expiration of E3 extensions, and (2) in-use short-run ferry retrofit/repower.

IV. Other Issues

[196] CAA section 202(a)(2). As noted above, EPA authorized CARB's existing CHC regulations which included compliance extensions. 76 FR at 77526.

EPA has long construed CAA section 209 as limiting the Agency's authority to deny California's requests for waivers and authorizations to their respective three listed criteria under section 209(b) and section 209(e)(2)(A). This narrow review approach is supported by decades of waiver and authorization practice and judicial precedent. In *MEMA I*, the D.C. Circuit held that the Agency's inquiry under section 209(b) is "modest in scope."[197] The D.C. Circuit further noted that "there is no such thing as a 'general duty' on an administrative agency to make decisions based on factors other than those Congress expressly or impliedly intended the agency to consider.[198] In *MEMA II*, the D.C. Circuit again rejected an argument that EPA must consider a factor outside the 209(b) statutory criteria concluding that doing so would restrict California's ability to "exercise broad discretion."[199] EPA's duty, in the authorization context, is thus to grant California's authorization request unless one of the three listed criteria is met. "[S]ection 209(b) sets forth the only waiver standards with which California must comply . . . If EPA concludes that California's standards pass this test, it is obligated to approve California's waiver application."[200] EPA has therefore consistently declined to consider factors outside the three statutory criteria listed in section 209(b) and 209(e)(2)(A).

EPA received comments that were outside the scope of the considerations involved in EPA evaluation of CARB's authorization requests under CAA section 209(e)(2)(A). Several commenters called on EPA to deny a waiver authorization for the 2022 CHC Amendments based on the rule being "arbitrary and capricious." Reasons include each of the compliance extensions not being equally available to all vessel categories, the use of inaccurate vessel population data for the estimated benefits calculations, inconsistencies between the 2008 rule and the 2022

[197] *MEMA I*, 627 F.2d at 1105.
[198] *Id.* at 1116.
[199] *Motor Equipment Manufacturers Association v. Nicols (MEMA II)*, 143 F.3d 449, 453 (D.C. Cir 1998).
[200] *Id.* at 463.

amendments that require replacement of engines prior to the end of their useful life, and lack of small business provisions.[201] These commenters interpret the "arbitrary and capricious" language in section 209(e) as meaning CARB's action may not be arbitrary and capricious. However, that language only applies to CARB's protectiveness determination under the first authorization criterion described in Section III.A, above, and EPA only reviews CARB's protectiveness determination under the first prong to determine whether it is arbitrary and capricious. Rather than otherwise broadly examining CARB's CHC amendments for any indications of being arbitrary and capricious, EPA's authorization review role is more limited.

EPA received a comment that claimed the 2022 CHC Amendments are arbitrary and capricious with respect to cruise ship lifeboats, for two reasons.[202] First, the commenter noted that CARB's previous rule did not cover lifeboats and CARB did not inform the cruise industry that the CHC amendments would now apply to cruise ship lifeboats that are also used as passenger "tender boats" until after the rule was adopted.[203] Second, the commenter noted that cruise ship lifeboats are covered by international regulations (International Convention on the Safety of Life at Sea (SOLAS), and the Life Saving Appliances Code (LCA Code)), and these international obligations prohibit the use of higher grades of biofuels than B7 for safety reasons (*e.g.*, risk of losing horsepower).[204]

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[201] *See, e.g.*, The Van Brothers Company, EPA-HQ-OAR-2023-0153-0027; Saltchuk Marine ("Saltchuk"), EPA-HQ-OAR-2023-0153-0028; Cruise Lines International Association ("CLIA"), EPA-HQ-OAR-2023-0153-0032; Seabulk; Kirby; Staite; AWO; Crowley. For discussion of each discrete issue identified by commenters to support their "arbitrary and capricious" contention, see Section III. of this document.

[202] Cruise Lines International Association (CLIA), EPA-HQ-OAR-2023-0153-0032.

[203] A "tender boat" is a boat that carries passengers and/or supplies between a larger boat and shore facilities when the large boat is not at berth. Lifeboats on cruise ships are often large enough to use as tender boats to ferry passengers to and from shore.

[204] While CLIA did not provide a source for this requirement, they may be referring to Resolution MEPC.320(74), *2019 Guidelines for Consistent Implementation of the 0.50% Sulphur Limit under MARPOL Annex VI* (adopted May 2019). Paragraph 3.2 states: "…3.2.4 Manufacturers of engines and equipment like oily water separators, overboard discharge monitors, filters, coalescers etc. need to be consulted to confirm the ability of engines and equipment to handle biodiesel blends up to B7 (i.e., 7.0% v/v). 3.2.5 It is recommended to avoid using such biodiesel blend fuels

With respect to the comments received alleging the CARB rule is arbitrary and capricious, EPA's role is not to review CARB's state rulemaking process to determine whether CARB complied with California state law, including the California Administrative Procedure Act. Similarly, EPA's role is not to provide guidance to parties regulated by CARB's regulations or to clarify whether the CARB regulations cover a particular mobile source type, such as lifeboats that may be used as passenger tender boats.[205] CARB is responsible for the various tasks and decisions regarding the implementation and enforcement of its regulations, and questions related to the applicability of the program to specific types of boats should be addressed to directly to CARB. EPA did not receive comments that claimed or provided evidence that this type of vessel could not meet applicable emission standards.

With regard to the comment on the inconsistency between CARB's renewable diesel fuel requirement and international regulations such as SOLAS and the LCA Code, this appears to be a question about whether these international requirements affect the enforceability of CARB's regulation, especially for lifeboats. EPA's section 209 review does not incorporate such other laws within its scope. Whether fuel requirements fall under the purview of such provisions is therefore beyond EPA's inquiry in this matter. With respect to the CAA section 209(e) scope of preemption, it pertains to standards relating to the control of emissions from nonroad engines and nonroad vehicles and does not pertain to fuels or whether fuel regulations are preempted by section 209.[206] CARB's fuel regulations are not before EPA for authorization nor are included in this Decision Document. Therefore, we cannot deny the authorization on this basis.

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for lifeboat engines, emergency generators, fire pumps, etc. where it is stored in isolated individual unit fuel tanks and subjected to conditions for accelerated degradation."

[205] EPA notes that the definition of dedicated emergency use vessels, such as lifeboats, is set forth at Cal. Code Regs, title 17, § 93118.5(d) as adopted in 2022.

[206] *See* 40 C.F.R. part 1074, app. A to subpart A ("EPA believes that states are not precluded under 42 U.S.C. 7543 from regulating the use and operation of nonroad engines, such as regulations on . . . sulfur limits on fuel . . . .").

EPA received other comments about the 2022 CHC renewable diesel fuel requirement,[207] which requires that beginning January 1, 2023, ship operators may use only R100 fuel or R99 fuel blend.[208] Commenters were concerned that the required renewable diesel is not available at local fuel docks and bunker providers may choose to not provide this new product, and that vessels that operate outside of California may not be able to purchase it for the return trip to California ports.

As noted above, fuel requirements are not before EPA for authorization consideration. Nonetheless, EPA notes that CARB provides two exemptions from the fuel requirements;[209] in both cases, CARB specifies that the fuel must use either EPA on-highway diesel or EPA nonroad diesel instead. First, if an owner has an existing fueling contract that cannot be modified to supply R100 or R99, the owner is not required to use R100 or R99 until the contractual issue is resolved or December 31, 2025, whichever occurs first. The vessel owner or operator must provide a copy of the documentation (such as the contract). Second, a harbor craft returning to California from a port located outside of California does not have to use R100 or R99 if that fuel is not available. The vessel owner or operator must retain records documenting the fuel purchase, the location and the name of the non-California port, and its lack of availability of R100 or R99 fuel. These records must be retained for a minimum of three years after the purchase of the fuel and must be made available to the Executive Officer on request. EPA considers these two provisions to fully address the commenters' fuel availability issues and, in any case, these issues are not before EPA for consideration in this authorization proceeding.

[207] Cal. Code Regs, title 17, § 93118.5(e)(7).
[208] *See, e.g.*, Island Packers Cruises; Seabulk.
[209] Cal. Code Regs, title 17, § 93118.5(e)(7)(B).

EPA received comments on procedural issues with CARB adopting the 2022 CHC Amendments regarding the speed of the rulemaking process and CARB's ability to finalize and/or enforce the 2022 CHC Amendments before EPA provides a waiver authorization.[210] EPA also received comment that the 2022 CHC Amendments are in conflict with the prior rule adopted in 2008 because the previous rule stated that engines would not need to be replaced over the life of the vessel if the engines of the vessels were updated to the contemporary (Tier 2) standards.[211] The CAA section 209(e)(2)(A) criteria do not allow EPA to deny a waiver based on our judgments regarding CARB's compliance with the California regulatory process, including issues with respect to purported inconsistency with a previous rulemaking that applies to in-service vessels. The 2022 CHC Amendments were adopted on July 21, 2022. As part of subsequent modifications made to the program, CARB filed a *Request for an Early Effective Date Pursuant To Government Code Section 11343.4(b)(3)*, dated November 14, 2022, explaining why it was necessary to retain the January 1, 2023 effective date.[212] EPA notes that though CARB may adopt its regulations before an EPA authorization, enforcement may only begin once EPA issues the authorization. Lead time is measured by the date of adoption of applicable emission standards in California, not by subsequent action by EPA.[213] EPA notes that CARB issued an *Implementation Fact Sheet* dated December 23, 2022, which sets out the key

[210] The Vane Brothers Company ("Vane Brothers-1"), EPA-HQ-OAR-2023-0153-0027; Vane Brothers Company ("Vane Brothers-2"), EPA-HQ-OAR-2023-0153-0050; Truck and Engine Manufacturers Association ("EMA"), EPA-HQ-OAR-2023-0153-0035.
[211] Island Packers Cruises; Kirby.
[212] Request for an Early Effective Date Pursuant To Government Code Section 11343.4(b)(3). (https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/eed.pdf, accessed December 18, 2024).
[213] 88 FR 24411, 24415 (April 20, 2023); 59 FR 36969, 36981-82 (July 20, 1994) (establishing that "lead time" is measured from when California adopts its regulations). Without reopening our regulations, EPA notes that CAA section 209(e)(2) is implemented in 40 CFR part 1074, subpart B. EPA's authorization for CARB's request removes preemption from CARB's regulations, allowing their enforcement.

compliance dates.[214] With regard to the consistency with the earlier rule, the earlier provision in CARB rule section 93118.5(e)(6)(C)(1) stated, "Once the in-use engine has been replaced with an engine that is U.S. EPA-certified to meet Tier 2 or Tier 3 marine or off-road emission standards, as set forth above, the engine is deemed to be in compliance with this subsection (e)(6) and no further replacements of this engine are required under this subsection." This statement applies to only subsection (e)(6) and not to section 93118.5(e) generally.

Commenters claimed various adverse impacts the program will have on port operations if vessels must be withdrawn from service. One commenter stated without the services their ships provide, "ships bringing critical goods into California ports would not be fueled for their next voyages, terminals and refineries would cease to have marine transportation to operate, and the overall impact to the domestic supply-chain would be disastrous."[215] Another commenter expressed concern that current alternate power capabilities for tugs are not enough to accomplish critical jobs for supply chain operation, including oil spill prevention and rescuing ships that break down offshore.[216] One commenter warned that many small businesses could be forced out of business and the marine industry would suffer as a whole, resulting in a negative on port economics without addressing the air pollution problem.[217] In addition, a commenter noted that small businesses are critical for the marine sector by providing entry positions for most mariners and "[i]f the small business sector is wiped out, the development of maritime personnel will suffer and the entire industry will be in jeopardy."[218]

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[214] *See* CHC Implementation Timeline Fact Sheet ADA 4.2.23 at https://ww2.arb.ca.gov/resources/fact-sheets/chc-factsheet-implementation-timeline (accessed December 18, 2024).
[215] Centerline Logistics-2.
[216] Baydelta Maritime-2.
[217] San Diego Working Waterfront; Westar Marine Services (the future of their women-owned small business is at stake).
[218] Staite.

CARB addresses these concerns by noting that owners/operators may recover costs through increased prices and fares and take advantage of extensions when additional compliance time is required. It also predicts that only a limited number of vessels would be replaced under the 2022 CHC Amendments.

Finally, EPA received comments recommending changes to the CARB program.[219] These recommendations include to extend the compliance deadlines (to 2027 to 2037, depending on year of engine, instead of 2024 to 2029) and even later for barges, dredges, crew and supply vessels, and workboats (2036 to 2042 instead of 2026 to 2029); reduce the burden of proof for demonstrating technical infeasibility and allow operators 18 months to complete a DPF retrofit; allow additional time before enforcement actions are taken; and revise the definition of "short run ferry." However, these comments do not relate to the CAA section 209 criteria. EPA may only grant or deny authorization for CARB's waiver request; it cannot dictate certain changes to the program. Therefore, EPA cannot deny the authorization on this basis.

[219] See, for example, Staite; AWO; Crowley; Curtin Maritime; Angel Island-Tiburon Ferry; Green Yachts 2.

V. Decision

After evaluating CARB's amendments to its Commercial Harbor Craft regulations described above, EPA is granting California authorization to enforce the 2022 CHC Amendments as requested, but with the following exceptions: (a) EPA is not taking any action on the ZEAT standards for in-use short run ferries, and (b) EPA is not taking any action on the standards for in-use engines and vessels (excluding commercial fishing vessels) that would apply after the expiration of the feasibility extensions when an engine or DPF is not feasible and the owner cannot afford vessel replacement (E3 extensions). Nonetheless, California is authorized to enforce provisions related to VDECS that are installed on any in-use vessel at any time.

Table 2: Summary of EPA's Authorization Decision for Engine Emission Requirements (93118.5(e))

Section	Regulation	Decision
All Harbor Craft (Excluding Commercial Fishing Vessels) – Requirements for New and Newly-Acquired Engines (Applicable On and After January 1, 2023)	CCR Title 13, Section 93118.5(e)(8)	EPA-Approved
All Harbor Craft (Excluding Commercial Fishing Vessels) – Requirements for New and Newly-Acquired In-Use Harbor Craft (Applicable On and After January 1, 2023)	CCR Title 13, Section 93118.5(e)(9)	EPA-Approved
Requirements for Zero-Emission and Advanced Technologies (ZEAT): For New, Newly-Acquired and In-Use Short-Run Ferries, and New and Newly-Acquired Excursion Vessels (Applicable On and After January 1, 2023)	CCR Title 13, Section 93118.5(e)(10)	EPA-Approved - Specific to **new and newly-acquired** short-run ferries and excursion vessels
		EPA-No decision - Specific to **in-use** short-run ferries
ZEAT Credit for Early or Surplus Deployments (Applicable On and After January 1, 2023)	CCR Title 13, Section 93118.5(e)(11)	EPA-Approved
In-Use Engines and Vessels (Excluding Commercial Fishing Vessels) – Requirements for Meeting Performance Standards (Applicable On and After January 1, 2023)	CCR Title 13, Section 93118.5 (e)(12)(A) through (e)(12)(D)	EPA-Approved - **Prior to** expiration of available extension renewals defined under CCR Title 13, Section 93118.5 (e)(12)(E)(3)*
		EPA-No decision - **After** expiration of available (E)(3) extension renewals for any vessel that received an extension under CCR Title 13, Section 93118.5 (e)(12)(E)(2) or (E)(3)*
	CCR Title 13, Section 93118.5 (e)(12)(E) through (e)(12)(F)	EPA-Approved
Engine Requirements on Commercial Fishing Vessels	CCR Title 13, Section 93118.5 (e)(13)	EPA-Approved
Low-Use Exemptions	CCR Title 13, Section 93118.5(e)(14)	EPA-Approved

* Note that extensions E2, E4, and E5 are unlimited, and E1 applies only to ZEAT.

Section 307(b)(1) of the CAA governs judicial review of final actions by the EPA. Petitions for judicial review of this action must be filed within 60 days from the date notice of this final action is published in the Federal Register.

VI. Statutory and Executive Order Reviews

As with past authorization and waiver decisions, this action is not a rule as defined by Executive Order 12866. Therefore, it is exempt from review by the Office of Management and Budget as required for rules and regulations by Executive Order 12866.

In addition, this action is not a rule as defined in the Regulatory Flexibility Act, 5 U.S.C. § 601(2). Therefore, EPA has not prepared a supporting regulatory flexibility analysis addressing the impact of this action on small business entities.

Further, the Congressional Review Act, 5 U.S.C. § 801, *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, does not apply because this action is not a rule for purposes of 5 U.S.C. § 804(3).[220]

Dated: January 6, 2025

Jane Nishida,

Acting Administrator.

[220] The U.S. Government Accountability Office (GAO) has issued a decision (in the context of its review of EPA's SAFE I Reconsideration decision) that the Congressional Review Act does not include adjudicatory orders and also excludes certain categories of rule from coverage, including rules of particular applicability. As part of this decision, the GAO also determined that even if the SAFE I Reconsideration waiver action were to satisfy the Administrative Procedure Act's definition of a rule, it would be considered a rule of particular applicability, and, therefore, would still not be subject to the CRA's submission requirement. https://www.gao.gov/products/b-334309.