

September 5, 2023

Transmitted via email

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Re: Petition Seeking Amendment of California's Regulations Regarding Commercial Harbor Craft and Ocean-Going Vessels At Berth; California Code of Regulations, title 17, Sections 93118.5 and 93130.2.

Dear Mr. Vafidis:

Thank you for the petition for rulemaking¹ submitted to the California Air Resources Board (CARB or Board) on June 30, 2023, on behalf of Crowley Maritime Corporation (Petitioner), entitled "Petition To Amend Regulations Regarding Commercial Harbor Craft and Ocean-Going Vessels At Berth" (Petition).² CARB acknowledged receipt of this Petition by email on June 30, 2023.³ We appreciate that the Petitioner agreed to extend the deadline for response to the Petition to September 5, 2023.

The Petition requested that CARB amend its regulations so articulated tug barges (ATB) would be regulated under the Ocean-Going Vessels At Berth regulation (At Berth Regulation)⁴ rather than the Commercial Harbor Craft regulation (CHC Regulation).⁵ Since 2009, a category of marine vessels known as ATBs has been subject to the requirements of CARB's CHC Regulation. Petitioner states that the ATBs at issue in this Petition are "ocean-going tank vessels consisting of a barge connected to a tug; in their cargo-carrying operations in California and elsewhere, the tug does not generally detach from the barge:

¹ Submitted pursuant to Government Code, § 11340.6.

² As you are aware, Government Code section 11340.6 provides that "any interested person may petition a state agency requesting the adoption, amendment, or repeal of a regulation as provided in [the California Administrative Procedure Act provisions on rulemakings]." Such a petition must "clearly and concisely" state: "the substance or nature of the regulation, amendment or repeal requested," "[t]he reason for the request," and "[r]eference to the authority of the state agency to take the action requested." (Gov. Code section 11340.6(a)-(c)).

³ See email from Steve Cliff, CARB Executive Officer, to Matthew Vafidis, counsel for Petitioner, attached as Exhibit A.

⁴ The At Berth Regulation is set forth at Cal. Code Regs. title 13, § 2299.3(c) and title 17, §§ 93118.3 *et seq.* (the superseded 2007 At Berth Regulation), and §§ 93130 through 93130.22 (2020 At Berth Regulation).

⁵ The CHC Regulation is set forth in the California Code of Regulations (Cal. Code Regs.), title 13, section 2299.5 and title 17, § 93118.5. CARB most recently adopted amendments to the CHC regulation on November 14, 2022.

OGV-ATBs function as a single vessel.”⁶ The Petition primarily requests that CARB cease regulating the subject ATBs under the CHC Regulation, and instead regulate such vessels under the At Berth Regulation. To achieve this, the Petition requests that CARB amend title 17, CCR sections 93130.2(b)(7) and (b)(50) the At Berth Regulation and 17, CCR sections 93118.5(d)-(f), as specified in the Appendices attached to the Petition.

Pursuant to the Government Code section 11340.7, CARB may respond to the Petition in writing or by hearing.⁷ By this letter, CARB is advising you that CARB has denied that Petition. The basis for the denial is set forth in this letter and its accompanying attachments.

Background on the Regulatory Provisions Addressed by the Petition

Commercial Harbor Craft Regulation

Initial CHC Regulation

CARB adopted the initial CHC Regulation on September 2, 2008. The initial CHC 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 (CHC) that operate within Regulated California Waters (RCW).⁸

The initial CHC Regulation defined CHC as “any private, commercial, government, or military marine vessel including, but not limited to, passenger ferries, excursion vessels, tugboats, ocean-going tugboats, towboats, push-boats, crew and supply vessels, work boats, pilot vessels, supply boats, fishing vessels, research vessels, U.S.

Coast Guard vessels, hovercraft, emergency response harbor craft, and barge vessels that do not otherwise meet the definition of ocean-going vessels or recreational vessels.”⁹

The initial CHC Regulation defined an “ocean-going vessel” as: “a commercial, government, or military vessel meeting any one of the following criteria: (A) a vessel greater than or equal to 400 feet in length overall (LOA) as defined in 50 CFR § 679.2, as adopted June 19, 1996; (B) a vessel greater than or equal to 10,000 gross tons (GT ITC) per the convention measurement (international system) as defined in 46 CFR 69.51-.61, as adopted

⁶ Petition, p. 1.

⁷ The Petition cites to Government Code, § 11340.7 to support its claim that “CARB is both required to both hear and consider the instant petition.” (p.16, emphasis in the original.) Government Code § 11340.7 only requires notification in writing or schedule the matter for public hearing, but not both. Petitioner does not cite to any additional authority in support of this claim.

⁸ 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).

⁹ Cal. Code Regs., title 17, § 93118.5(d)(36).

September 12, 1989; or (C) a vessel propelled by a marine compression-ignition engine with a per-cylinder displacement of greater than or equal to 30 liters.”¹⁰

The initial CHC Regulation expressly specified that it applied to “towboats and tugboats engaged in or intending to engage in the service of pulling, pushing, or hauling alongside tank vessels or tank barges”¹¹ and to ocean-going tugboats and towboats. Specifically, the initial CHC Regulation specified that “[n]otwithstanding the provisions of [the At Berth regulation] ... this section shall apply to any ocean-going tugboats and towboats and shall supersede the requirements of [the At Berth regulation] in their entirety for ocean-going tugboats and towboats.”¹²

The initial CHC Regulation required propulsion and auxiliary engines on new CHC to be certified to the most stringent federal new marine engine emission standards applicable (generally Tier 2 through Tier 4 marine engine emission standards). 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 to also be equipped with the best available control technology (BACT) to reduce emissions of oxides of nitrogen (NOx) or diesel particulate matter (DPM) 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. These compliance 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 to only fuel diesel engines in CHC vessels with CARB diesel fuel or specified alternative diesel fuels.

¹⁰ Id. at § 93118.5(d)(50).

¹¹ Id. at § 93118.5(b)(3).

¹² Id. at § 93118.5(b)(4).

2011 Amendments to the CHC Regulation

On April 11, 2011, CARB adopted amendments to the CHC Regulation (hereinafter 2011 CHC Amendments). The 2011 CHC Amendments primarily allowed CHC owners or operators to utilize CARB or EPA Tier 2 or higher certified off-road engines as auxiliary or propulsion engines in both new and in-use CHC vessels and expanded the in-use requirements to three additional categories of CHC: crew and supply, barge, and dredge vessels.

2022 Amendments to the CHC Regulation

Requirements for New and Newly Acquired In-Use CHC

On July 21, 2022, CARB adopted amendments to the CHC Regulation (hereinafter 2022 CHC Amendments or 2022 CHC Regulation). The 2022 CHC Amendments specify that new and newly acquired in-use harbor craft vessels¹³ 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 standards (federal Tier 3 or Tier 4 marine standards) or California or federal off-road engine standards (California or federal Final Tier 4 off-road engine standards) applicable to new engines with the same power ratings and displacements as the subject propulsion and auxiliary engines, and that (2) additionally reflect the addition of a level 3 Verified Diesel Emission Control Strategy (VDECS), such as a verified diesel particulate filter (DPF).¹⁴

Engines rated at or below 600 kW in new harbor craft must demonstrate compliance with performance standards that are equivalent to federal Tier 4 marine engine standards equipped with a level 3 verified DPF if any federal Tier 4 marine engines with applicable power and duty cycle ratings have been certified as of the date the keel for the new vessel has been laid. If no Tier 4 marine engines are available, the new engines must demonstrate compliance with performance standards equivalent to federal Tier 3 marine engine standards equipped with a level 3 verified DPF. Federal Tier 4 marine engines are widely available for engines above 600 kW, and consequently engines above this power rating must demonstrate compliance with performance standards equivalent to federal Tier 4 marine engine standards equipped with a level 3 verified DPF.

If 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

¹³ A "newly acquired harbor craft" is defined as "a harbor craft that a person did not own or operate inside of Regulated California Waters prior to January 1, 2023." Cal. Code Regs., title 13, § 2708(d).

¹⁴ A level 3 VDECS corresponds to at least an 85% reduction of emissions of particulate matter from baseline engine emissions of particulate matter. Cal. Code Regs., title 13, § 2708(b)(1)(D).

federal marine engine, 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 described below once the CHC vessels commence operations in Regulated California Waters.

Requirements for New and In-Use CHC Engines

Beginning January 1, 2023, new or newly acquired in-use engines for new or in-use harbor craft other than commercial fishing vessels may not be sold, offered for sale, leased, rented, or acquired unless they meet one of four specified criteria:

- The engines are certified to the most stringent federal marine engine standards (Tier 3 or Tier 4), or California or federal Tier 4 Final off-road standards¹⁵ applicable to new engines with the same power ratings and displacements as the subject engines.¹⁶ Engines that additionally meet the performance standards discussed above for new CHC (i.e., they meet either applicable federal marine engine standards or California or federal Tier 4 Final off-road standards and additionally meet at least an 85% reduction of emissions of particulate matter from baseline engine emissions) also meet this criterion.¹⁷
- Engines that are newly acquired within a six month “sell-through” period that commences on the date federal Tier 3 or Tier 4 marine standards, or California or federal Tier 4 Final off-road standards have come into effect for a new engine of applicable horsepower rating and duty cycle rating as the engine being replaced do not need to comply with the newly effective standards. In 2020, EPA amended 40 CFR Part 1042 to delay Tier 4 engine certification requirements for high-power density engines used in some high-speed vessels that are not commonly used in California until 2022 or 2024. CARB staff does not expect this provision will significantly impact the ability of CHC owners or operators to meet the marine Tier 4 or marine Tier 4 and level 3 VDECS performance standards by the established compliance dates;
- Engines acquired to replace non-functioning engines due to equipment failure must be certified to standards that are at least as stringent as the standards of the engines

¹⁵ Engines certified to meet the Tier 4 Final off-road standards in effect on the date of acquisition for a new engine of applicable horsepower rating and duty cycle rating may only be acquired for use as an auxiliary or propulsion engine on harbor craft if the engine or vessel manufacturer has also complied with the provisions of 40 CFR 1042.605, which establish requirements for marinized land-based engines.

¹⁶ Newly acquired marine engines rated below 600 kW are not required to meet federal Tier 4 marine engine standards if no engines with the same engine category and rated horsepower are available.

¹⁷ Engines that are rebuilt to meet Tier 3 or Tier 4 marine standards or Tier 4 Final off-road standards may be acquired if those standards are the most stringent emission standards in effect on the date of engine rebuild for a new engine of the same horsepower rating and duty cycle rating as the subject engine, and provided the owner or operator demonstrates the rebuilt engines do in fact meet applicable standards.

they are replacing, subject to CARB Executive Officer's determination that no engine certified to the currently applicable standards is produced by any manufacturer with the appropriate physical or performance characteristics to repower the vessel; or

- Engines acquired to replace engines that have been previously granted low-use exceptions must be certified to emission standards that are at least as stringent as the emissions standards of the engines that have been granted the low-use exceptions.

General Requirements for In-Use CHC

The preexisting CHC Regulation generally required specified categories of in-use CHC (ferries, excursion vessels, tugboats, towboats, barges, dredges, and crew and supply vessels) 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 in-use CHC to now include all tank barges,¹⁸ pilot vessels, push boats, workboats, research vessels, commercial passenger fishing vessels, commercial fishing vessels, and temporary replacement vessels operating in exceedance of specified low-use exemption limits. For all vessel categories except commercial fishing vessels and temporary replacement vessels, the 2022 CHC Amendments require each engine on regulated in-use vessels to demonstrate compliance with the performance standards discussed above for new and newly acquired in-use CHC, i.e., standards 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 specified compliance dates. Engines on commercial fishing vessels are required to meet Tier 2 marine or off-road standards by January 1, 2023, or repower to Tier 3 marine or off-road standards by specified compliance dates. Engines on temporary replacement vessels are required to meet Tier 2 marine or off-road standards.

Compliance Extensions

The 2022 CHC Amendments include several provisions that provide vessel owners and operators additional flexibility to comply with the in-use requirements. Those provisions provide qualifying vessel owners and operators up to six to eight years (depending on vessel type) of extensions for engines. However, other provisions can provide potentially unlimited extensions needed to accommodate situations where no certified engines and/or level 3 VDECS are available, or engines or VDECS are not well suited for specific vessels.

Engine and DPFs are Not Available (Potentially Unlimited Exemptions)

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 in-use performance

¹⁸ Only tank barges under 400 feet in length and under 10,000 gross tons were subject to the preexisting in-use CHC requirements.

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.

If a vessel owner or operator repowers an in-use CHC with an engine that meets the most stringent federal Tier 3 or Tier 4 marine engine standards or California or federal Tier 4 Final off-road standards after January 1, 2023, they need not replace such engines if a verified DPF subsequently becomes available for other engine models that meet the most stringent federal Tier 3 or Tier 4 marine engine standards or Tier 4 Final off-road standards. However, if owners or operators elect to repower an existing engine with a higher tier engine with the same power rating, they must consider all available engine models (within the power and duty cycle ratings needed), regardless of engine manufacturer or engine model.

Engines and DPFs are Not Suited for Specific Vessels, Financial Hardship

Owners or operators of all categories of in-use CHC are eligible for a maximum of six to eight years (depending on vessel type) 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 vessels equipped with compliant engines is not financially possible; or (2) needed vessel modifications will reduce passenger capacity by at least 25%, 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).

DPFs Not Suited for Vessels Equipped with Tier 4 Engines and With Limited Operating Hours (Potentially Unlimited Extensions)

Owners or operators of all categories of in-use CHC equipped with federal Tier 4 marine engines or California or federal Tier 4 Final off-road engines and with limited operating hours are eligible for renewable two-year extensions, if they demonstrate that no DPFs can be installed in the vessels due to fitment issues, and that the vessels do not operate above specified annual hour thresholds. Those threshold limits are halved if the vessels have a

homebase or have a regularly scheduled stop located within 2 miles of a disadvantaged community (DAC).¹⁹

Annual Operating Thresholds for Feasibility Extension (E)4

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

Alternative Control of Emissions (ACE) Plan

The preexisting CHC Regulation provided CHC owners or operators an alternative means of complying with the CHC Regulation’s hour-meter and new vessel and in-use emissions requirements if they implemented CARB approved alternative emission control strategies (AECS) that were demonstrated to achieve DPM and NOx emission reductions equivalent to or greater than the reductions required by the primary compliance requirements.

The 2022 CHC Amendments now provide CHC owners or operators the option to utilize a CARB-approved Alternative Control of Emissions (ACE) plan to comply with the general emissions requirements for in-use CHC. Such 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 DPM and NOx emissions that are at least equivalent to the reductions of DPM and NOx emissions that would otherwise occur if they were to comply with the primary emission requirements, and in a single specified air basin or other defined geographic area in California, from the time period beginning January 1, 2023, through December 31, 2034, with a maximum of any two year extension, and all engines receiving extensions pursuant to an ACE plan must comply with applicable general requirements applicable to in-use CHC by December 31, 2034.

ACE plans may only reflect emissions reductions attributable to CHC that are subject to the requirements of the CHC Regulation and may not include emissions reductions attributable to other mobile sources or stationary sources. Moreover, applicants must demonstrate that proposed ACE plan will not result in a higher emissions burden to disadvantaged communities relative to other communities impacted by the emissions from their vessel(s).

¹⁹ For purposes of this extension, only auxiliary engines on barges or barge-mounted dredges, and main propulsion engines on all other regulated in-use vessel categories must meet federal Tier 4 marine or California or federal Tier 4 Final off-road engine standards and must operate below the specified operational thresholds. Barges and barge-mounted dredges are not equipped with propulsion engines.

If CARB's Executive Officer approves an application to utilize an ACE plan, the successful applicant must maintain specified records and test records for the lifetime of each engine and must make such records available upon request by CARB. Additionally, the ACE Plan pathway no longer exempts CHC owners and operators from installing non-resettable hour meters.

At Berth Regulation

Initial At-Berth Regulation

CARB adopted the now-superseded initial At-Berth Regulation, the Airborne Toxic Control Measure for Auxiliary Diesel Engines Operated on Ocean-Going Vessels At Berth in a California Port (2007 Regulation), on October 16, 2008.²⁰ The 2007 Regulation applied only to container, refrigerated cargo, and cruise vessels visiting six California ports: Hueneme, Los Angeles, Long Beach, Oakland, San Diego, and San Francisco, and required affected vessels to reduce emissions at berth by either plugging into shore power²¹ or using an equally effective compliance strategy (such as a capture and control system). Specifically, the 2007 Regulation required fleets of container and refrigerated cargo vessels making 25 or more visits or cruise vessels making 5 or more visits to any of the six regulated ports to limit the operations and/or emissions of auxiliary engines while docked, reducing NOx and DPM emissions at berth. The 2007 Regulation required regulated vessel fleets to reduce DPM and NOx emissions by 50% beginning in 2014, increasing to 70% in 2017 and 80% in 2020.

2020 At-Berth Regulation

On August 27, 2020, the Board adopted the 2020 At Berth Regulation. The 2020 At Berth Regulation is designed to build upon the benefits achieved by the 2007 At Berth Regulation by extending auxiliary engine emissions reductions requirements to additional categories of OGVs (roll-on, roll-off (ro-ro) and tanker vessels), adding emissions reductions requirements for tanker vessel auxiliary boilers and expanding the applicability of the regulation to new ports and terminals.

It is important to note that the scope of the At Berth Regulation's requirements is more limited than the requirements of the CHC Regulation. As previously discussed, the CHC Regulation requires owners or operators of affected vessels to demonstrate that both primary and auxiliary engines meet performance standards, while the At Berth regulation primarily establishes requirements that require affected vessels to use a CARB-approved emissions control strategy to achieve at least an 80% reduction in emissions from auxiliary

²⁰ The now-superseded 2007 At Berth regulation is set forth at Cal. Code Regs. title 13, §2299.3(c) and title 17, §93118.3.

²¹ "Shore power" is defined in the 2007 regulation as "electrical power being provided by either the local utility or by distributed generation." Cal. Code Regs., tit. 17, § 93118.3(c)(31).

engines or boilers (if applicable) when vessels are docked at berth.²² Consequently, in contrast to the CHC Regulation, the At Berth regulation does not regulate emissions from affected vessels as they transit to and from California berths.

Response to the Petition

The Petition requests that CARB exempt ATBs that have the capacity to store (and transport) over 120,000 bbl. of petroleum products from the CHC Regulation and instead subject such ATBs to the provisions of the At Berth Regulation.²³

The Characteristics and Operational Profiles of ATBs Establish that ATBs are More Properly Characterized as Ocean Going Vessels than as Commercial Harbor Craft

The Petition's first basis for the proposed amendments is that CARB does not appropriately understand or consider "the nature and operational profiles of the subject ATBs,"²⁴ and that these factors establish that the subject ATBs are more properly characterized as ocean-going vessels that are subject to the At Berth regulation than the vessels subject to the CHC Regulation.²⁵ Specifically, Petitioner maintains that although ATBs are technically comprised of both a high-powered tugboat and an attached barge, in practice its ATBs "do not detach the tug from the barge and the tug does not come out of the notch of the barge"²⁶ and consequently, its ATBs are functionally equivalent to (and indistinguishable from) single unit tanker vessels that are subject to the At Berth Regulation.²⁷

Response: Based on my review of the documents associated with the 2007 and the 2020 At Berth Regulations, and the 2011 and 2022 Amendments to the CHC Regulation, CARB finds that this claim misstates CARB's basis for distinguishing ATBs from single vessel tanker vessels and its basis for subjecting ATBs to the requirements of the CHC Regulation rather than the At Berth Regulation.

During the rulemaking action in 2007 for the initial CHC Regulation, commenters (including the American Waterways Operators, a national trade association for the tugboat, towboat, and barge industry, and includes Petitioner as a member) recommended that CARB not

²² Staff Report, Initial Statement of Reasons: Public Hearing to Consider the Proposed Control Measure for Ocean-Going Vessels At Berth (2019) p. ES-11 (hereinafter 2020 At Berth ISOR). Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/ogvatberth2019/isor.pdf>.

²³ Petition, p. 2, fn. 2; pp. 4-5.

²⁴ Petitioner uses the term "ocean-going ATBs, or "OGV-ATBs" to refer to these ATBs. This Response to the Petition uses the term "ATBs."

²⁵ Petition, pp. 2-5, 8; Exhibit A, pp. 1-5; Exhibit B, pp. 1-2; Exhibit D; Exhibit E, pp. 4-5; Exhibit F, pp. 2-3; Exhibit G.

²⁶ Petition, Exhibit A, p. 4.

²⁷ Petition, pp. 1-3, 5, 8-10; Exhibit A, pp. 2-5; Exhibit B, pp. 1-2; Exhibit D; Exhibit E, pp. 4-5; Exhibit F, pp. 2-3, 5, 7, Exhibit G.

regulate ocean-going tugboats and towboats under the CHC Regulation, but instead regulate such vessels under the At Berth Regulation.²⁸ After thoroughly reviewing all of the comments and materials relating to this topic, CARB disagreed with that recommendation, explaining that “while most ocean-going tugboats do not perform harbor tugboat duties, they are functionally equivalent or otherwise very similar to their harbor tugboat counterparts,”²⁹ that it never intended to regulate ocean-going tugboats under the At Berth Regulation, and that such vessels made over 500 annual visits to California ports, indicating a “significant number of these vessels spend time in California ports.”³⁰

During the rulemaking action for the 2020 At Berth regulation, certain commenters (again including Petitioner) recommended that CARB regulate ATBs under the At Berth Regulation instead of the CHC Regulation.³¹ After thoroughly reviewing all of the comments and materials relating to this topic, CARB disagreed with that recommendation.

Petitioner repeatedly states in the Petition that CARB’s rationale for not accepting that recommendation was solely based on the following statement in the Staff Report for the 2020 At Berth regulation: “...[D]espite being defined as a subcategory of tankers, articulated tug barges are considered a barge and a tug separately. As such, they are considered a harbor craft instead of an ocean-going vessel and must comply with the requirements of CARB’s Commercial Harbor Craft Regulation and not of this Proposed Regulation.”³² Petitioner further states that CARB never provided a rational explanation for why it excluded ATBs from the definition of ocean-going vessels in the 2020 At Berth regulation.³³

Petitioner understates the analysis and consideration CARB undertook and set forth in the 2020 At Berth related rulemaking proceeding. Over the course of the rulemaking process, Petitioner met and spoke with CARB Board members in addition to submitting written comments regarding this issue for CARB staff to consider. One of the six “master responses”

²⁸ CARB, Final Statement of Reasons for Rulemaking: Public Hearing to Consider the Adoption of Regulations to Reduce Emissions From Diesel Engines on Commercial Harbor Craft Operated Within California Waters and 24 Nautical Miles of the California Baseline, pp. 24-25. Available at:

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2007/chc07/chcfsor.pdf>

²⁹ CARB, Final Statement of Reasons, Public Hearing to Consider the Adoption of Regulations to Reduce Emissions From Diesel Engines on Commercial Harbor Craft Operated Within California (2007), pp. 24-25.

Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2007/chc07/chcfsor.pdf>

³⁰ Id at p.25.

³¹ E.g. Petition, Ex. G, December 6, 2019 Letter from Crowley to The California Air Resources Board re Proposed Control Measure for Ocean Going Vessels at Berth (At-Berth Rule). CARB also received and responded to Petitioner’s additional written comments recommending ATBs be regulated under the At Berth Regulation, dated April 24, 2020; June 25, 2020; July 22, 2020; August 27, 2020, as well as oral comments, including June 25, 2020. See CARB, Proposed Control Measure for Ocean-Going Vessels At Berth, Final Statement of Reasons (November 2020).

³² 2020 At Berth ISOR, p.IV-6; See also Petition, pp. 8-9; Exhibit A, pp. 1-2, 4,6; Exhibit D; Exhibit G.

³³ Petition, p. 3.

CARB prepared in its Final Statement of Reasons for the 2020 At Berth regulation is dedicated entirely to this exact topic.³⁴ That response states, in part, that:

CARB acknowledges that ATBs can do similar work, at least over shorter routes, as traditional ocean-going tanker vessels. *However, they generally operate on coastal trades and not on trans-oceanic voyages like traditional ocean-going tanker vessels.* From a policy and regulatory perspective, CARB staff disagrees with industry's position that ATBs should be considered OGVs instead of commercial harbor craft. ATBs consist of two separate vessels (a tugboat and a barge) that are: 1) subject to two separate sets of U.S. Coast Guard regulations, 2) are not equipped with boilers to power steam-driven pumps (like crude oil carriers have), 3) are cheaper to build, and 4) require fewer workers to operate. As such, ATBs align more closely with other definitions of CHC, and CARB intends to regulate them as such. Both tugs and barges (including ATBs) exceeding 400 feet, 10,000 gross tons, or 30 L/cylinder displacement, will still be considered CHC for CARB regulatory purposes. By classifying ATBs as CHC, it ensures that all barges, whether transported as ATBs or line-towed by other ocean-going tugs, will be subject to the same regulatory requirements.

2020 At Berth FSOR, pp. 61-61.³⁵ After consideration of all the information and analysis, the CARB Board disagreed with Petitioner's position that ATBs should be regulated under the At Berth Regulation and adopted the 2020 At Berth Amendments.

CARB further notes that Petitioner's internet website, as well as Exhibit A to its petition to CARB, includes a statement that its 550 class ATBs "were developed and designed specifically for West Coast Operations and weather conditions...."^{36,37}

CARB further determined that subjecting ATBs to the CHC Regulation instead of the At Berth regulation would result in greater emissions reductions.

The CHC regulation requires the use of ultra-low sulfur diesel (ULSD) for all vessels, including tugs and barges. By redefining ATBs as OGVs, there would be a potential

³⁴ CARB, Final Statement of Reasons, Proposed Control Measure for Ocean-Going Vessels at Berth (2020), at pp. 61-62. (Hereinafter 2020 At Berth FSOR.) Available at:

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/ogvatberth2019/fsor.pdf>

³⁵ In addition to these distinctions provided by the 2020 At Berth FSOR, the California Department of Fish and Wildlife escort tug requirements in the Oil Spill Prevention and Response Act under CCR 14, Division 1, Subdivision 4, Chapter 4, Subchapter 1 Tank Vessel Escort Regulations for the San Francisco Bay Region has separate requirements for the tugs escorting ATBs compared to OGV tank vessels listed in Part 851.9.1.

³⁶ Crowley Shipping, Meet The Fleet: 550 Class Articulated Tug Barges (ATBs), <https://www.crowley.com/shipping/deep-sea/atb/#550-class-articulated-tug-barges-at-bs>, last accessed July 27, 2023. See also Petition, Exhibit A, p. 4.

³⁷ Crowley's 550 class ATBs have capacities to store and transport over 150,000 bbl of petroleum products. Crowley. See Crowley, 550 Class Articulated Tug Barge Fleet (ATB) Spec Sheet, https://www.crowley.com/wp-content/uploads/sites/7/2020/04/CM_Petro_550ATB_specsheet.pdf, last accessed July 27, 2023.

for the use of higher sulfur content fuels allowed for use in OGVs, resulting in higher emissions. *Additionally, the CHC regulation includes in-use emission standards for both main and auxiliary engines, resulting in in-transit emissions reductions as well as reductions at berth.* Considering ATBs as OGVs, reduces the opportunity to control in-transit emissions. Because ATBs engage in coastwise trade, additional operations outside of Regulated California Waters could still be impacting air quality in coastal California communities. Regulating ATBs as CHC provides stronger public health protections due to the timing and extent of intended mission reduction targets.

2020 At Berth FSOR, pp.61-62. (Emphasis added).³⁸

Petitioner also raised largely identical issues during the rulemaking action for the 2022 amendments to the CHC Regulation, urging CARB to consider subjecting ATBs to the At Berth regulation instead of the CHC Regulation.³⁹ In addition to these written comments, CARB's Executive Officer (EO), Deputy EO, and certain managing staff met with Petitioner regarding its position on the 2022 CHC Amendments.

In responding to those comments, CARB again rejected Petitioner's characterization that its ATBs are functionally identical to other single vessel tanker vessels:

This comment does not provide CARB staff with an adequate explanation of the "unique nature of ATBs." [The tug component of a]rticulated tug barges (ATBs) are regulated by USCG as Subchapter M towing vessels (CHC) and have been subject to CARB's current CHC Regulation since 2009. ATB barges are regulated by USCG as Subchapter O petrochemical tank barges (barges under 400 feet are a CHC category regulated by the current CHC Regulation)

...

2022 CHC FSOR, p. 166

CARB disagrees with the commenter's assertion that ATBs do not operate like other vessels regulated under the California CHC regulation. The commenter's statement that "traditional harbor craft predominately operate in California ports and harbors" misstates the fact that the CHC regulation applies to commercial vessels that operate in RCW, which includes waters extending up to 24 nautical miles from the California baseline. Instead, information in the rulemaking record indicates that ATBs and the tugboats pushing such ATB barges regularly operate in RCW. CARB staff understands that ATBs regularly transit along the coast in shipping lanes approximately 50 nautical miles from shore. However, ATBs regularly transit through RCW to and from

³⁸ See also 2020 At Berth FSOR, response to comments at pp. 202, 597, and 598.

³⁹ CARB, Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response, Public Hearing to Consider the Proposed Amendments to the Commercial Harbor Craft Regulation (2022) (hereinafter 2022 CHC FSOR), pp. 167, 188. Available at:

<https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/fsor.pdf>

anchorage and California (CA) refinery terminals inside RCW. CARB's Emissions Inventory shows ATB tugs generate significant transit emissions inside RCW and CARB staff was told by Crowley that ATB barge engines also generate transit emissions en route to refinery terminals to test and warm up auxiliary engines in the hour before docking at a terminal. ATB tugs and barges at anchor generate emissions from both tug and barge auxiliary generator engine operation.

CARB also disagrees with the commenter's statements that ATBs are operated analogously to self-propelled ocean-going tanker vessels. As CARB staff explained in the Staff Report for the CHC 2022 Amendments, an ATB tug and barge is dissimilar to an ocean-going vessel because the tug and ATB barge combination is capable of being separated into two separate vessels, even if the tug and barge do not commonly operate independently. ATB tugs have always been subject to the in-use requirements of the Current Regulation. Additionally, ATB tugs and barges are recognized as dual-mode vessels and are regulated separately by USCG. Moreover, because ATBs are competing with line-towed petrochemical tank barges with most operating over intermediate distance voyages in coastal trade of clean petroleum products, ATBs are more similar in design and operation to other CHC engaged in line towing.

2022 CHC FSOR, pp. 168-69.

CARB also determined that subjecting ATBs to the CHC Amendments would achieve greater emissions reductions than if it subjected ATBs to the At Berth Regulation.

CARB's Emissions Inventory shows ATB tugs generate significant transit emissions inside RCW and CARB staff was told by Crowley that ATB barge engines also generate transit emissions en route to refinery terminals to test and warm up auxiliary engines in the hour before docking at a terminal. ATB tugs and barges at anchor generate emissions from both tug and barge auxiliary generator engine operation. CARB staff observed during a 2018 ATB vessel visit that when docked at refinery terminals to offload petrochemical product, ATB tugs and barges will separate pinned connections to allow for changes in barge draft height due to load condition changes in the barge as product is offloaded and ballast water is loaded or vice versa. CARB staff was told ATB barges regularly run product and ballast water pump engines at high loads for extended periods of time of up to 24 or 36 hours at a refinery terminal. Many ATB barges operate a combination of multiple auxiliary engines in various applications with cumulative power in the range of three to four megawatts during product and ballast water pumping activity. From CHC Reporting Database, CARB staff is aware many ATB barge auxiliary engines operating in RCW are unregulated pre-Tier marine engines due to a loophole in the current CHC Regulation (from 2008 to the end of 2022) that exempted ATB barge engines from the In-Use Rule portion of the current CHC Regulation due to all ATB barges being over 400 feet in length.

2022 CHC FSOR, p. 168.

The CHC 2022 Amendments establish emissions-related requirements that are collectively more stringent than the emissions-related requirements established under the At-Berth regulation, because the At-Berth regulation currently only requires OGVs to reduce emissions generated from engines while OGVs are docked at berth at California ports. Although the CHC 2022 Amendments also establish requirements that require CHC to limit emissions while they are docked, the 2022 Amendments additionally also establish requirements that are applicable to CHC vessels while they are operated in RCW. For instance, the 2022 Amendments require CHC to be fueled with renewable diesel fuel having a sulfur limit not to exceed 15 parts per million (ppm), whereas OGVs operating in RCW are only required by a separate CARB regulation to be fueled with marine gas oil or marine diesel oil with maximum sulfur limits of 0.1% sulfur by weight, (equivalent to 1000 ppm of sulfur). Furthermore, the CHC 2022 Amendments establish requirements applicable to both newly acquired and in-use propulsion and auxiliary engines in CHC that are absent in the At Berth regulation. Consequently, regulating ATBs under the At Berth Regulation would result in increased emissions of harmful air pollutants that adversely impact the health and environment of Californians compared to the 2022 Amendments. Accordingly, there is a rational basis for CARB to regulate ATBs under the CHC regulation rather than the At-Berth regulation.

Additionally, the inclusion of ATBs in the CHC Regulation will result in emission reductions earlier than if ATBs were subject to the At Berth Regulation. Under the 2022 CHC Amendments, pre-Tier and Tier 1 diesel engines on ATBs will be required to be repowered to the Tier 3 or 4 standard between December 31, 2023, and December 31, 2025, depending on engine model year. The earliest requirements for tanker vessels to reduce emissions under the At Berth Regulation is January 1, 2025, for vessels visiting the ports of Los Angeles and Long Beach, and emission reduction requirements don't start until January 1, 2027, for tanker vessel visits elsewhere in the state.

Conclusion: The Petition presents no information that differs from the information the Petitioner previously presented to and that was considered by CARB during the development and promulgation of the 2020 At Berth and 2022 CHC Regulations, and, consequently, CARB has no basis to depart from CARB's prior conclusions that ATBs do in fact exhibit design and operational characteristics that are distinct from the design and operational characteristics of single vessel tanker vessels, or CARB's determination that regulating ATBs under the CHC Regulation would result in greater reductions of emissions than if ATBs were regulated under the At Berth Regulation.

Cost, Safety, and Availability of Technology Needed to Comply with the CHC Regulation

The Petition's second basis for requesting the proposed amendments is the claim that the technology needed to comply with the requirements of the CHC Regulation cannot be implemented at a commercially reasonable cost.⁴⁰

Specifically, in a letter dated April 29, 2020, Petitioner estimates that its costs for its ATB fleet to comply with the 2022 CHC Regulation would include \$10,000 per vessel class to conduct a feasibility study assessing the technical feasibility of retrofitting or repowering existing vessels with compliant technologies,⁴¹ and either retrofit costs ranging from \$2,700,000 for a 180,000 bbl ATB barge to \$6,050,000 for a 180,000 bbl ATB tugboat, or replacement costs ranging from \$90,000,000 for a 150,000 bbl ATB to \$105,000,000 for a 180,000 bbl ATB.⁴²

In letters dated November 15, 2021, and June 2, 2022, Petitioner estimated that its costs to retrofit existing vessels would range from \$9.55 million dollars for a 150,00 bbl capacity ATB vessel to \$8.75 million for a 180,000 bbl capacity ATB vessel,⁴³ and estimated its costs to purchase new engines would range from \$90 million dollars for a 150,000 bbl capacity ATB vessel to \$105 million for a 180,000 bbl capacity ATB vessel.⁴⁴ In this Petition, Petitioner maintains that the costs of compliance cannot be recovered through increased charter hire and are accordingly not commercially feasible.⁴⁵

Response: Based on my review of the documents associated with the 2022 Amendments to the CHC Regulation, CARB finds the claim that compliance costs are not commercially feasible is not supported.

In developing the 2022 CHC Regulation, CARB estimated the compliance costs for various vessels, including ATB barges and ATB tugboats, by estimating both the compliance paths vessel owners would likely utilize to comply with the requirements of the 2022 CHC Regulation and the costs associated with those compliance paths. CARB relied on cost data supplied by stakeholders during the rulemaking's extensive public process, and on data provided in an evaluation conducted by the California State University Maritime Academy (CSU Maritime Academy or CMA) in 2019 that, in pertinent part, determined the feasibility of repowering or retrofitting a specific in-use CHC within each of the 13 vessel categories

⁴⁰ Petition, p. 6. *See*, Crowley letter dated April 29, 2020, Exhibit C hereto, pp. 1-3; Crowley letter dated November 15, 2021, Exhibit E, p.6; Crowley letter dated June 2, 2022, Exhibit F, p.3.

⁴¹ Petition, Exhibit C, pp. 1-2

⁴² *Id.* at p. 2.

⁴³ The letter does not expressly state whether these costs only include costs to retrofit barges, or also include costs of retrofitting the tugboats that push the barges.

⁴⁴ Again, the letter does not specify whether these costs only include costs to purchase new engines for only barges or both the barges and the tugboats that push the barges.

⁴⁵ Petition, p. 8.

with Tier 4 marine engines or retrofit aftertreatment, including assessing the extent of reconfiguration that would be required for repowers and retrofits.⁴⁶ The CMA report specifically assessed the likely compliance option for a petrochemical barge vessel equipped with nine auxiliary engines, determined that while no Tier 4 engines were available at the time to repower those engines, retrofitting the engines with a DPF was feasible.⁴⁷

In CARB's Standard Regulatory Impact Assessment (SRIA), staff documented their comprehensive cost estimates and economic analysis for the 2022 Amendments, with detailed cost inputs described in Appendix A of the SRIA.⁴⁸ This represented the best available data when staff calculated the cost impacts of the 2022 Amendments. CARB estimated the compliance costs for ATB barges and ATB tugs, based in part on information provided by Petitioner in emails dated April 29, May 6, and June 10, 2020,⁴⁹ and determined the direct annual amortized costs of the 2022 CHC Regulation for typical businesses would reach an annual maximum of \$2.2 million dollars for ATB tugs and \$960,000 for ATB barges during the implementation period from 2023 to 2037 (in \$2019).⁵⁰ CARB determined the direct annual non-amortized costs for typical businesses would reach \$7.24 million dollars for ATB tugs and \$1.25 million for ATB barges in 2025.⁵¹

The Petitioner specifically provided the estimated compliance costs as previously discussed in its letters of November 15, 2021, and June 2, 2022,⁵² during the public comment periods for the 2022 CHC Regulation.⁵³ CARB considered this information and ultimately made no change to the regulation in response to this comment. CARB staff explained that it estimated the costs of retrofitting ATB tugboats and barges with Tier 4 engines and DPFs as \$9.2 million, which was within the range of the \$9.55 million estimate provided by Crowley, and that it estimated that the average cost of replacing ATB vessels was \$59.7 million, which was lower than Crowley's estimated vessel replacement costs,⁵⁴ but was within 45% of

⁴⁶ CSU Maritime Academy, Evaluation of the Feasibility and Costs of Installing Tier 4 Engines and Retrofit Exhaust Aftertreatment on In-Use Commercial Harbor Craft, 2019 (hereinafter "CMA report"). Available at <https://ww2.arb.ca.gov/resources/documents/commercial-harbor-craft-tier-4-feasibility-report>, last accessed February 2021.

⁴⁷ CMA report, p. 28

⁴⁸ CARB, Standardized Regulatory Impact Assessment, Proposed Amendments to the Regulation to Reduce Emissions From Diesel Engines on Commercial Harbor Craft Operated within California Waters and 24 Nautical Miles of the California Baseline (2021 CHC SRIA). Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/appc-1.pdf>

⁴⁹ Appendix A, Cost Analysis Inputs and Assumptions for Standardized Regulatory Impact Assessment, Table II-K, pp. A-55 to A-57, and Table II-F, pp. A-41 to A-43. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/appc-1.pdf>

⁵⁰ CARB, 2021 CHC SRIA, p. 101.

⁵¹ Id. at p. 102

⁵² See Also Petition, Exhibits E and F.

⁵³ 2022 CHC FSOR p. 280.

⁵⁴ Ibid.

Crowley's highest cost estimate, and within roughly a third of Crowley's lowest cost estimate. CARB staff determined that no changes were merited to the regulation after carefully considering this comment, and the Board ratified that decision by approving the adoption of the 2022 CHC Regulation.

Mechanisms Exist for ATBs to Recover Increased Compliance Costs

Petitioner asserts that compliance costs cannot be recovered through increased charter hire and are accordingly not commercially feasible;⁵⁵ this claim, however, is not substantiated by the Navigistics consulting report they cite as the basis.⁵⁶ The report states that "if DPFs are approved and become available, the most likely response is that ATB owner/operators will seek charters that specifically reimburse owners for the cost of retrofitting Tier 4 engines with DPFs."⁵⁷ The report estimates that the additional daily charter premium would be 27% for a four-year charter,⁵⁸ but this assumes that the Petitioner would seek to be completely reimbursed for its compliance costs by a single charter contract regardless of the length of contract term, and provides that the premium could be reduced substantially by distributing the costs over a longer time period. The Petitioner provides no indication or evidence that its charter company would choose an alternative method of importing and exporting products rather than pay all or part of that premium. Also, this figure does not include any recovery of compliance costs through grant programs provided by CARB and other state agencies, even though CARB is aware that the Petitioner has recently been awarded grant funding for a battery plug-in hybrid tugboat.⁵⁹

CARB also notes that a company that instead chooses to charter OGV tankers would potentially incur costs to comply with the requirements of the At Berth regulation, and Petitioner does not provide any comparison of the impact of such costs. The Navigistics report estimates that the total cost of transporting finished petroleum products to market in a compliant ATB would be \$0.65 per barrel, but does not provide any context for this cost increase for CARB to evaluate its basis. In addition, it does not compare that cost with a similar analysis for OGV tanker compliance with the At Berth Regulation, or for rail and truck alternatives, all of which are expected to result in compliance costs for upcoming regulations affecting those sectors.⁶⁰ Additionally, Petitioner provides no information to substantiate that it is unable to absorb a portion of or all costs associated with compliance with the 2022 CHC Amendments.

However, if the Petitioner chooses to pass along all costs of compliance with the 2022 CHC Amendments, staff estimate that the price increase per gallon of finished petroleum product

⁵⁵ Petition, p. 8.

⁵⁶ *Ibid.*

⁵⁷ Navigistics report, p. 15.

⁵⁸ *Id.*, p. 16.

⁵⁹ Port and Freight Infrastructure Program Selected Projects - Project Detail Summary, July 6, 2023, Available at: <https://calsta.ca.gov/-/media/calsta-media/documents/pfip-awards-summary-narrative-7-6-23-a11y.pdf>.

⁶⁰ Navigistics report, p. 16.

would be approximately \$0.006 per gallon based on the information provided by the Petitioner describing compliance costs for repowering their 550-class and 650-class ATBs⁶¹ amortized over a 14-year equipment lifetime, and product transport data provided in Exhibit A.⁶² Staff further estimate that the price increase per gallon of finished petroleum product would be approximately \$0.004 per gallon based on CARB's cost analysis information in the rulemaking record.⁶³

While ATBs would face costs in response to the 2022 CHC Amendments, OGV tankers will also face compliance costs due to the recently adopted Control Measure for Ocean-Going Vessels At-Berth, which will impose requirements for tanker vessels to reduce emissions at berth starting in 2025. As described in the Proposed Control Measure for Ocean-Going Vessels At Berth Standardized Regulatory Impact Assessment (SRIA), staff estimated the cost increase to tankers to comply with the At Berth regulation per gallon of product as \$0.008.⁶⁴

Additionally, as noted above, Petitioner's website, Exhibit A and Exhibit E of the petition all state that the 550-class ATBs were developed and designed specifically for West Coast operations and weather conditions.⁶⁵ CARB considers it implausible that Crowley would choose to strand or repurpose these assets rather than incur costs to comply with the 2022 CHC Amendments, given opportunities to recover costs and the large market share it holds in the transport of petroleum products to, from, and within California.

Safety Concerns

Petitioner also asserts that DPF technology "is neither safe or feasible for these types of ATB marine engines."⁶⁶ Specifically, in the letter dated November 15, 2021, it states "[a]t this point, it is highly questionable if DPF technology can be installed with Tier 3 or Tier 4 engines in a technically-feasible or safe manner. Although DPF devices have been used on trucks, albeit with some serious consequences such as fire danger, there is no indication that DPFs can be used on large marine engines, or that it would be safe to do so."⁶⁷

Response: CARB received and considered this same comment during the rulemaking action for the 2022 CHC Regulation.⁶⁸ CARB made no change to the regulation in response

⁶¹ Petition, Exhibit C, p. 3, and Exhibit E, p. 6.

⁶² Petition, Exhibit A, p. 2.

⁶³ Commercial Harbor Craft Regulation Standardized Regulatory Impact Assessment, Tables II-F and II-K. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/appc-1.pdf>.

⁶⁴ Proposed Control Measure for Ocean-Going Vessels At Berth Standardized Regulatory Impact Assessment, p. 96. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2019/ogvatberth2019/appc-1.pdf>.

⁶⁵ Petition, Exhibit A, p. 4 and Exhibit E, p. 4.

⁶⁶ Petition, p.8; *See also* Petition, Exhibit C, p.3, and Exhibit E, p. 6.

⁶⁷ Petition, Exhibit E, p. 6.

⁶⁸ 2022 CHC FSOR, p. 271.

to this comment, but responded, in pertinent part,⁶⁹ that Appendix E to the ISOR⁷⁰ outlined staff's review and assessment of the feasibility associated with the performance standards associated with the regulation, acknowledged that with respect to retrofitting existing vessels "any additional aftertreatment devices must be consistent with gross register tonnage requirements to maintain USCG compliance,"⁷¹ and specifically stated in response to concerns that required compliance technologies might present overheating or fire concerns:

...Tier 4 engines and DPFs do not operate at a higher temperature than engines certified to less stringent emission standards. This is because DPFs are designed to only increase the temperature of the exhaust if the load of the engine is low and the DPF needs to be regenerated. There are many other vehicles and pieces of equipment that are designed with passive DPFs, meaning, that they are designed to operate under the heat of the engine alone, with no additional heat source to raise the temperature of the aftertreatment. Passive DPFs may be a viable option for certain categories of harbor craft depending on the duty cycle profile. In addition, the thermodynamic efficiency of modern Tier 4 engines is better than some of the older-tier engines. With more efficient combustion, less waste heat is generated in the exhaust stream. Therefore, Tier 4 engines and DPF aftertreatment are not associated with hotter exhaust temperature potential than Tier 3 and earlier engines without aftertreatment. In addition, vessel owners and operators would be required to continue to meet USCG safety regulations applicable to their vessels, including but not limited to rules governing surface temperature and exhaust manifold insulation requirements within the engine rooms.

RTC, pp. 15-16.

Staff also explained that it met with the U.S. Coast Guard during the development of the 2022 CHC Amendments and discussed topics including the Coast Guard's guidance on addressing concerns expressed by the regulated industry regarding installing DPFs in numerous CHC vessel types, and regarding vessel design standards relating to harbor craft exhaust systems and their applicability to DPFs.⁷²

CARB requires, as a condition of DPF verification as set forth by 13 CCR 2706(w), analysis of all potential safety and catastrophic failure issues associated with the use of the diesel emission control strategy. Similarly, the U.S. Coast Guard has shared with CARB that they are requiring failure analyses to be performed on the initial set of

⁶⁹ 2022 CHC FSOR, p. 79.

⁷⁰ Appendix E to the 2022 CHC ISOR, Technical Support Document and Assessment of Marine Emission Control Strategies, Zero-Emission, and Advanced Technologies for Commercial Harbor Craft. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/appe.pdf>.

⁷¹ CARB, Response to Comments on the Draft Environmental Analysis for Proposed Amendments to the Commercial Harbor Craft Regulation (2022), (hereinafter RTC) p. 15. Available at: <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/chcrtc.pdf>.

⁷² Id. at pp. 16-17.

DPFs being installed on marine vessels in California that are anticipated to meet the Level 3 requirements (and could be used to comply with the Proposed Amendments). These tests and evaluations could be used by DPF manufacturers to satisfy both CARB and U.S. Coast Guard requirements to ensure vessel and DPF safety after installation. Because these evaluations and requirements are in effect, CARB does not anticipate implementation of the Proposed Amendments to introduce any relevant safety concerns after systems have been carefully designed, rigorously tested, and modified to minimize the potential for failure.

RTC, p. 17.

Staff also stated:

The design and performance of DPF systems is reviewed when manufacturers undergo approval through the Verification Program as set forth by 13 CCR 2700 et seq. Many DPFs are designed with active regeneration strategy, where they use fuel injection or electrical resistance to increase the temperature of the exhaust if engines operate for extended periods of time at lower loads. DPFs are not designed to elevate the temperature to values higher than the engines are capable of achieving...

RTC, p. 48

CARB further notes that a commenter stated that it has developed a set of marine engineered engines that will meet the Tier 4 plus DPF requirements and are “packaged and protected” to present no fire risks,⁷³ and that CARB staff stated it did not receive “any data supporting claims that diesel engine applications with variable duty cycles cause premature component failures and fires.”⁷⁴

No Availability of DPFs

Petitioner further maintains that there are currently no DPFs available that would allow it to meet the performance requirements of the 2022 CHC Regulation.⁷⁵ To support this claim, Petitioner cites to the Navigistics report, which states that “there are no USCG or Classification Society approved DPFs available for marine engines”⁷⁶ and “if no USCG approved marine DPFs are available, ATBs will not be available for serving the California market after the required compliance date.”⁷⁷

⁷³ 2022 CHC FSOR, p. 29

⁷⁴ Id. at p. 86

⁷⁵ Petition, p. 6.

⁷⁶ Navigistics report, p. 8.

⁷⁷ Id. at p. 15.

Response: These statements reflect a misunderstanding of USCG’s role in approving DPFs, which is discussed in the RTC.⁷⁸ The USCG does not “approve” marine DPFs, rather they approve plans for and inspect installation of marine DPFs on a vessel-specific basis, with an emphasis on overall safety and operability of the vessel. CARB staff are aware of multiple vessels that have received USCG approval to operate in California with DPFs, either for compliance with the BACT requirement for new ferries in the original CHC Regulation, or for durability testing of DPF products currently undergoing CARB’s verification process. At this time, USCG has not indicated to CARB staff that they intend to require DPFs on ATB tugs and barges to be type-classed by a classification society. The statements in the Navigistics report also do not consider that the CHC Regulation contains a renewable two-year compliance extension (E2) specifically for the scenario of a lack of available DPFs for a particular engine.

Additional Response: This claim is consistent with other comments submitted during the rulemaking action for the 2022 CHC Regulation, which generally state that Tier 4 engines and/or associated DPFs are not currently available, and/or requesting that CARB delay the adoption of the regulation until the technology needed to meet the performance standards is commercially available.⁷⁹

CARB responded to those comments in both the RTC and the 2022 CHC FSOR,⁸⁰ explaining that staff based its assessment of the technical feasibility of compliance technologies on the best available technical feasibility data and emissions inventory, and that staff was fully aware that elements of the proposed regulation are technology-forcing and accordingly rely on manufacturers successfully transferring DPF technology from the on-road and off-road sector to the marine sector.⁸¹

CARB also acknowledged that the feasibility of installing compliant technology must be determined on a vessel-specific basis and stated that information contained in Appendix E to the ISOR demonstrated that manufacturers are either currently manufacturing or planning to manufacture the technology needed to meet the requirements of the 2022 CHC Regulation.⁸² CARB specifically noted that as of September 2021, 22 models of Tier 4 engines were available, “and additional engine and DPF manufacturers are undergoing the design, certification, and verification process to bring their products to market.”⁸³ CARB also stated that although it had not verified any level 3 DPFs, it received “multiple applications and is working with the applicants through the Verification Procedure as set forth in 13 CCR 2700 et seq. As of July 2023, one preliminary application for verification has been

⁷⁸ RTC, Master Response, pp. 14-17.

⁷⁹ See, e.g. 2022 CHC FSOR, pp. 66, 68-74, 76, 77,79- 81,86, 88-90 94,97,99,100,101; RTC, pp. 32, 39-41, 47, 49, 50, 53, 55, 57, 58, 60-61, 71, 73, 77. 79, 82, 89, 95, 100-102, 105, 115, 116, 122, 126.

⁸⁰ See, e.g., 2022 CHC FSOR, pp. 67-101; RTC pp. 14-17, 47.

⁸¹ RTC, p. 48.

⁸² 2022 CHC FSOR, p. 75.

⁸³ RTC, p. 47.

approved, and the system is currently in operation and undergoing a durability demonstration that is required before full verification.”^{84,85} “Additionally, there are two other retrofit aftertreatment OEMs currently pursuing CARB Marine Verifications, one for a Level III DPF and the other a full exhaust aftertreatment system with a combined Level III DPF and a Mark V SCR system (85% PM and 85% NOx reduction).”⁸⁶

Other commenters stated that technologies needed to comply with the 2022 CHC Regulation are currently commercially available and are capable of being timely applied to marine vessels. For example:

Technologies such as SCRs, DPFs, diesel oxidation catalysts (DOC), and ammonia slip catalysts (ASC) are commercially available today and can be found on millions of highway and off road engines since 2007. Retrofit DPFs have been installed on many thousands of in-use heavy-duty vehicles and off-road equipment in California and more broadly worldwide to provide significant reductions in diesel particulate matter (PM), as well as reductions in toxic hydrocarbon and carbon monoxide (CO) emissions from the in-use fleet.

MECA agrees with the staff report’s assessment that marine applications pose unique operating environments and challenging packaging envelopes for emission control technologies. However, proper application engineering over the past twenty years has resulted in the successful application of DOCs, DPFs, and SCR catalysts on a variety of marine engines today.

Since the mid-1990s, urea SCR technology has been successfully installed on a variety of marine applications in Europe, including auto ferries, cargo vessels, military ships, and tugboats, with hundreds installed on engines ranging from approximately 450 to over 10,000 kW. In addition, the International Maritime Organization Tier 3 requirements which came into force in 2021 have required that new engines utilize marine specific SCR installations in NOx Emission Control Areas (N-ECAs) which include the coastal waters of Europe, the United States and Canada. CARB funded a demonstration of a DPF+SCR retrofit of a tug boat that achieved over a 95% reduction in PM emissions and more than a 90% reduction in NOx from two parallel Detroit Diesel 525 hp engines. The New York Port Authority retrofitted two Staten Island Ferries with SCR that remain in operation. Globally, there is growing experience with emission control technologies installed on marine diesel engines and in particular in Europe where Euro V engine standards require DPFs on inland waterway vessels to meet strict particulate regulations.

⁸⁴ Id. at 240.

⁸⁵ Id. at 90, 92, 98

⁸⁶ Id. at 99-100.

2022 CHC FSOR, p. 30.

"[I]n 2006, Rypos retrofitted a U.S. Navy barge, which operated for over 19,000 total combined hours without incident. In 2014, the U.S. Office of Naval Research in partnership with UC Riverside independently tested these DPFs and found them to be operating as designed. Again, zero operational safety issues have occurred."⁸⁷

Response: Based on the above-described information, CARB does not agree with Crowley's claim that no DPFs will be available to enable it to comply with the 2022 CHC Regulation, and CARB accordingly declines to approve the Petition on this basis. CARB further notes that Crowley's asserted need for the amendments based on this factor is mitigated by the fact that, as previously discussed, the 2022 CHC Regulation contains provisions that provide eligible CHC owners additional time to meet the required performance standards, 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, and that will also allow engine and aftertreatment OEMs to further develop and transfer existing technologies in other operational sectors into the marine sector.

Alleged Environmental Impacts Resulting from the Removal of Petitioner's ATBs From California

The Petitioner's third basis for requesting the proposed amendments is the claim that subjecting ATBs to the 2022 CHC Regulation will result in increased emissions of harmful air pollutants by other categories of mobile sources. Specifically, Petitioner maintains that because it will not be able to comply with the 2022 CHC Regulation,

it will no longer operate its ATBs in Regulated California Waters, and that if no other operators elect to operate compliant ATBs, "California will need to import petroleum products from overseas, and movements of petroleum within California will need to be made by truck or by rail (assuming that were possible)."⁸⁸ Relying on an analysis prepared by the Starcrest Consulting Group, Petitioner then asserts that the emissions generated from the trucks and locomotives under this scenario would result in higher harmful emissions in California and potentially, "for communities elsewhere in the U.S. and rest of the world." Petitioner further maintains that "[t]he Starcrest analysis demonstrates that movement of the ATB cargoes by a truck alternative within California - even assuming enough trucks are available - might reduce NOx and PM emissions in comparison with ATBs, but this alternative would result in much higher GHG emissions. Locomotives - again, assuming there is capacity for rail to be an alternative - and tankers would emit comparatively more

⁸⁷ Id. at p. 31.

⁸⁸ Petition, pp. 6-7.

NOx than ATBs,⁸⁹ and further states that utilizing other vessels to transport the petroleum products currently transported by Petitioner's ATBs would also increase emissions.⁹⁰

Response: This claim is premised on a series of assumptions; namely, if Petitioner elects not to operate its ATBs in Regulated California Waters, other companies will decide to forego the resulting business opportunity and/or elect not to transport the petroleum products at issue in their ATBs, and that the business decisions of those other companies will then require California to transport the petroleum products at issue by other modes – trucks, trains, or vessels that are not subject to the 2022 CHC Regulation. However, the Petition does not provide any specific information, data, or other evidence sufficient to establish that the aforementioned assumptions will occur, and, consequently, CARB finds that those claims are speculative and unsubstantiated. CARB also notes that Petitioner submitted a very similar comment during the rulemaking action for the 2022 CHC Regulation,⁹¹ and that the Board similarly determined that Petitioner's prior comment was speculative and unsubstantiated, and inconsistent with information that ATBs offer cost advantages over medium-range tankers in transporting petroleum products.⁹² Consequently, for the above-mentioned reasons, CARB concludes that this basis does not warrant approving the proposed amendments.

The Navigistics report highlights the operational advantages and cost-effectiveness of ATBs (Articulated Tug Barges) compared to OGV (Oil and Gas Vertical) tankers, with lower manning requirements. Stranding assets may occur if Crowley withdraws its ATBs from the California market, as their design is specifically tailored for West Coast operations. According to the Navigistics report, when an ATB is not in use, its tug is not repurposed for other tasks like ship assist or moving barges.⁹³

The Navigistics report presents four alternatives for transporting petroleum products to and within California, but it fails to provide adequate analysis demonstrating that these alternatives would be more cost-effective than complying with the 2022 CHC Amendments from trucks and locomotives in California, which Starcrest does not consider the following CARB regulations in its emissions analysis:

1. Drayage Truck/ Truck and Bus, and Advanced Clean Fleets Regulations:

The existing Drayage Truck regulation requires all drayage trucks to operate with a 2007 model year or newer engine, while the Truck and Bus Regulation mandates all trucks, including drayage vehicles, to have 2010 or newer model year engines by January 1, 2023. CARB also adopted the Advanced Clean Fleets regulation in April 2023, which, in pertinent part, requires drayage fleets to begin

⁸⁹ Petition, p. 7.

⁹⁰ Petition, p. 7.

⁹¹ RTC, p. 271; 2022 CHC FSOR, p. 170.

⁹² RTC, pp. 271-272.

⁹³ Navigistics Report, p. 6.

acquiring zero-emission drayage trucks beginning January 1, 2024, and requires all trucks conducting drayage operations to be zero-emitting by 2035. The Advanced Clean Fleets regulation additionally requires that manufacturers only produce and sell zero-emitting medium- and heavy-duty vehicles starting in the 2036 model year.

2. Advanced Clean Trucks Regulation

Approved on June 25, 2020, this regulation mandates manufacturers to transition from diesel trucks and vans to zero-emission trucks starting in 2024. The aim is to have approximately 100,000 electric trucks in California by the end of 2030 and around 300,000 by 2035.

3. In-Use Locomotive Regulation

From January 1, 2030, Switch, Industrial, or Passenger Locomotives with an Original Engine Build Date of 2030 or newer must operate in a ZE (Zero Emission) Configuration at all times while in California. Similarly, from January 1, 2035, any Freight Line Haul Locomotive Engine with an Original Engine Build Date of 2035 or newer must also operate in a ZE Configuration at all times while in California. These regulations are designed to reduce emissions and promote the use of cleaner, zero-emission locomotives in the state.

Considering the implementation of these regulations, ATB emissions will likely become more significant compared to other transportation modes.

Emissions Consequences of Proposal

Finally, in evaluating this Petition, CARB must necessarily consider the emissions consequences resulting from the amendments proposed by the Petition. The 2022 CHC Amendments are projected to cumulatively reduce statewide emissions of approximately 34,340 tons of oxides of nitrogen (NO_x), 1,610 tons of fine particulate matter (PM_{2.5}), and 2,460 tons of reactive organic gases (ROGs), and 415,000 metric tons of greenhouse gases (GHGs) emitted from CHC from 2023 to 2028.⁹⁴ These emissions reductions will assist California in attaining the national and state ambient air quality standards for ozone and

⁹⁴ 2022 CHC ISOR, pp. VI-3 to VI-6.

particulate matter, in reducing the serious associated risks to the health and welfare of Californians,^{95,96} and in addressing climate change induced harms.

Petitioner maintains that subjecting its ATBs to the 2022 CHC Amendments will necessarily result in increased emissions of air pollutants;⁹⁷ however, as previously analyzed, that claim is premised on unsubstantiated and speculative assertions. Furthermore, that claim is not consistent with CARB staff's evidentiary-based conclusion that subjecting ATBs to the 2022 CHC Amendments will in fact result in emission benefits compared to Petitioner's request to subject ATBs to the 2020 At Berth Regulation.

CARB's Emissions Inventory shows ATB tugs generate significant transit emissions inside RCW and CARB staff was told by Crowley that ATB barge engines also generate transit emissions en route to refinery terminals to test and warm up auxiliary engines in the hour before docking at a terminal. ATB tugs and barges at anchor generate emissions from both tug and barge auxiliary generator engine operation. CARB staff observed during a 2018 ATB vessel visit that when docked at refinery terminals to offload petrochemical product, ATB tugs and barges will separate pinned connections to allow for changes in barge draft height due to load condition changes in the barge as product is offloaded and ballast water is loaded or vice versa. CARB staff was told ATB barges regularly run product and ballast water pump engines at high loads for extended periods of time of up to 24 or 36 hours at a refinery terminal. Many ATB barges operate a combination of multiple auxiliary engines in various applications with cumulative power in the range of three to four megawatts during product and ballast water pumping activity. From CHC Reporting Database, CARB staff is aware many ATB barge auxiliary engines operating in RCW are unregulated pre-Tier marine engines due to a loophole in the current CHC Regulation (from 2008 to the end of 2022) that exempted ATB barge engines from the In-Use Rule portion of the current CHC Regulation due to all ATB barges being over 400 feet in length.

...

⁹⁵ NOx emissions pose serious risks to the health and welfare of Californians, because NOx emissions not only irritate the respiratory system and aggravate respiratory diseases, they also react in the atmosphere to form additional pollutants - ozone and particulate matter that are harmful to respiratory systems (ISOR, p. I-23). PM, in particular, poses serious risks to the health and environment of Californians, including respiratory ailments that can increase premature mortality, hospital admissions for cardiopulmonary causes, acute and chronic bronchitis, asthma attacks, and developing lung cancer. (ISOR, p. I-22). The 2022 CHC Amendments are expected to reduce the total number of incidents for premature mortality, cardiovascular and respiratory hospitalizations, and emergency room visits between 2023-2038, in an amount equivalent to monetized health benefits of approximately \$5.25 billion (2022 HC ISOR, pp. V-7).

⁹⁶ The 2022 CHC Amendments will reduce emissions of pollutants that adversely impact several nonattainment regions in California: the San Francisco Bay Area, the San Joaquin Valley, Ventura County, the South Coast Air Basin, and San Diego County. Appendix C-1 to 2022 CHC ISOR, p. 22.

⁹⁷ Petition, pp. 4, 5, 7.

The CHC 2022 Amendments establish emissions-related requirements that are collectively more stringent than the emissions-related requirements established under the At-Berth Regulation, because the At-Berth Regulation currently only requires OGVs to reduce emissions generated from engines while OGVs are docked at berth at California ports. Although the CHC 2022 Amendments also establish requirements that require CHC to limit emissions while they are docked, the 2022 Amendments additionally also establish requirements that are applicable to CHC vessels while they are operated in RCW. For instance, the 2022 Amendments require CHC to be fueled with renewable diesel fuel having a sulfur limit not to exceed 15 parts per million (ppm), whereas OGVs operating in RCW are only required by a separate CARB regulation to be fueled with marine gas oil or marine diesel oil with maximum sulfur limits of 0.1% sulfur by weight,³⁵ (equivalent to 1000 ppm of sulfur). Furthermore, the CHC 2022 Amendments establish requirements applicable to both newly acquired and in-use propulsion and auxiliary engines in CHC that are absent in the At Berth regulation. Consequently, regulating ATBs under the At Berth Regulation would result in increased emissions of harmful air pollutants that adversely impact the health and environment of Californians compared to the 2022 Amendments. Accordingly, there is a rational basis for CARB to regulate ATBs under the CHC regulation rather than the At-Berth regulation.

2022 CHC FSOR, p. 168-169 (Emphasis added).

The Petition does not provide any facts, information, or other evidence that refutes CARB's determination that regulating ATBs under the CHC Regulation will result in more reductions of harmful air pollutants than if it were to regulate ATBs under the 2020 At Berth regulation, and consequently, CARB concludes that the proposed amendments would undermine the emissions benefits of both the existing 2020 At Berth Regulation and the existing 2022 CHC Regulation.

The Petition is fundamentally premised on Crowley's perception that CARB solely based its determination of whether to regulate ATBs under either the 2020 At Berth Regulation or the 2022 CHC Regulation upon a determination whether ATBs primarily operate as either ocean-going vessels, or instead primarily operate as harbor craft.⁹⁸ That premise is incorrect. As indicated above, CARB also considered the fact that ATBs generate significant quantities of emissions while transiting Regulated California Waters and while docked at refinery terminals, that many ATB barge engines are unregulated engines (i.e., are not equipped with any emissions controls), and that it would achieve greater reductions of emissions by subjecting ATBs to the 2022 CHC Regulation since the 2022 CHC Regulation establishes emissions-related requirements that are collectively more stringent than the emissions-related requirements associated with the 2020 At Berth regulation. In other words, Crowley fails to consider that CARB is authorized to regulate ATBs since ATBs are a

⁹⁸ Petition, pp. 1-3, 5,8-10; Exhibit A, pp. 2-5; Exhibit B, pp. 1-2; Exhibit D; Exhibit E, pp. 4-5; Exhibit F, pp. 2-3, 5, 7; Exhibit G.

mobile source that emits air pollutants, and that authority necessarily extends to decisions regarding which regulation best achieves emissions reductions from ATBs. In this case, the Board determined regulating ATBs under the 2022 CHC Regulation will achieve more emissions reductions than if it regulated ATBs under the 2020 At Berth regulation.

The requested amendments would effectively reduce the emissions benefits of the 2022 CHC Regulation and would accordingly be inconsistent with CARB's statutory mandates, including directives to achieve the maximum feasible and cost-effective emissions reductions from new and in-use non-vehicular sources, including marine vessels (Health & Saf. Code § 43013(b)), to expeditiously reduce NOx emissions from diesel marine vessels and other mobile sources that "significantly contribute to air pollution problems" (Health & Saf. Code § 43013(h)), and to reduce emissions of toxic air contaminants from nonvehicular sources (Health & Saf. Code § 39666) and to achieve "the maximum technologically feasible and cost-effective reductions of greenhouse gases" (Health & Saf. Code § 38560). Consequently, CARB finds that the Petition does not demonstrate that the proposed amendments are consistent with the CARB's overall statutory charge to improve air quality, to protect the public health and welfare, and to mitigate the harms posed by greenhouse gases by controlling emissions from marine vessels, or that the proposed amendments are reasonably necessary to effectuate the purposes of those statutes.

Request for Clarity Regarding the Alternative Control of Emissions Provision in the 2022 CHC Regulation

Petitioner also requests that CARB amend the 2022 CHC Regulation to "incorporate more certainty" into the regulation, and specifically requests that CARB more clearly state "... that Alternative Compliance Programs or plans for Alternative Control of Emissions may be approved on an interim basis or for a set period of time."⁹⁹

The proposed amendments to the existing Alternative Control of Emissions (ACE) provision in the 2022 CHC Regulation,¹⁰⁰ however, would go beyond clarifying that provision and would substantively amend existing requirements.

First, the ACE provision does not allow CARB's Executive Officer to approve a proposed ACE on an interim basis or for a set period of time other than the period of time specified in section 93118.5(f)(1)(A) (January 1, 2023, through December 31, 2034). The ACE provision specifies that applicants electing to use an alternative strategy in lieu of complying with the requirements of the renewable diesel fuel requirements, requirements for Zero-Emission and Advanced Technologies (ZEAT) for short-run ferries, and new and newly acquired excursion vessels, requirements for in-use engines and vessels (excluding commercial fishing vessels), or requirements for engines on commercial fishing vessels must submit

⁹⁹ Petition, p. 9.

¹⁰⁰ Cal. Code Regs., title 17, § 93118.5(f)(1).

specified information, including information that demonstrates a proposed alternative strategy will achieve equal or greater reductions of diesel PM and NOx emissions than would have been achieved than if the applicant were to comply with the corresponding primary compliance requirement for a time period beginning January 1, 2023, through December 31, 2034.¹⁰¹ The ACE provision also clearly provides that after an applicant's ACE application is deemed to be complete, CARB's Executive Officer shall "take final action to either approve or deny an ACE application and shall notify the applicant accordingly."¹⁰²

That regulatory text does not expressly state that CARB's Executive Officer may conditionally approve an application for an interim basis or for a period of time shorter than the period of time specified in section 93118.5(f)(1)(A), and indeed, it could not impliedly allow CARB's Executive Officer to do so, since the ACE provision explicitly requires that any approval be based on a determination that the emissions reductions resulting from a proposed alternative strategy are at least equivalent to the emissions reductions of the primary compliance requirements over a fixed time period,¹⁰³ and in a single specified air basin or other defined geographic area in California.¹⁰⁴ In other words, both the text and the structure of the ACE provision indicate CARB's Executive Officer can only fully approve or fully disapprove an application. This conclusion is also consistent with CARB staff's explanation in the 2022 CHC ISOR that it needs the information specified in § 93118.5(f)(1)(A) to fully and critically assess whether proposed alternative compliance strategies will, at a minimum, achieve the same emissions benefits of the 2022 CHC Regulation over a time period extending over eleven years.¹⁰⁵

The Petition provides no explanation of how a conditional or interim approval of an alternative compliance strategy is consistent with the text or structure of the ACE provision or would better fulfill the purpose of the ACE provision, but simply maintains that incorporating such 'clarity' would "incorporate the goal of ongoing cooperation between CARB and industry to ensure reasonable alternatives for compliance."¹⁰⁶ The proposed amendments would not 'clarify' existing requirements but would instead establish requirements that are inconsistent with the text, purpose and intent of the ACE provisions, and would accordingly hinder both regulated owners' and CARB's abilities to consider alternative compliance strategies.

The Petition also requests that CARB amend the ACE provisions to, in pertinent part, distinguish ATBs from CHC,¹⁰⁷ and to provide ATBs additional compliance flexibilities that are not available to CHC under the ACE provisions. As a threshold matter, CARB

¹⁰¹ See, e.g., §§ 93118.5(f)(1)(A), (f)(1)(F), and (f)(1)(G).

¹⁰² Cal. Code Regs., title 17, § 93118.5(f)(2)(F).

¹⁰³ Cal. Code Regs., title 17, §§ 93118.5(f)(1)(A), (f)(1)(F).

¹⁰⁴ Cal. Code Regs., title 17, § 93118.5(f)(1)(G).

¹⁰⁵ 2022 CHC ISOR, p. IV-98.

¹⁰⁶ Petition, p. 9.

¹⁰⁷ Petition, pp. 10-12.

disapproves the proposed amendments to distinguish ATBs from CHC for the reasons previously discussed in this response to the Petition.

The Petition also requests that ACE provisions be amended to incorporate additional compliance flexibilities. Specifically, the existing ACE provision specifies that applicants must demonstrate that a proposed alternative compliance strategy achieves at least equivalent emissions reductions as the corresponding primary compliance requirement for those CHC vessels in an applicant's fleet that operate within a single air basin or other defined areas, as approved by CARB's Executive Officer.¹⁰⁸

The Petition seeks to expand the applicability of the ACE provisions to all ATBs in an applicant's fleet, "with respect to every California air basin in which the ATB is operating,"¹⁰⁹ but provides no rationale or basis for that amendment other than "...[t]he section should include provisions that ... recognize the operational profile of ATBs in more than one air basin in California, and ways for ATBs to comply, in addition, through an approved ACE that allows for an expanded definition of fleet averaging..."¹¹⁰

Because the sole basis for that proposed amendment is Petitioner's premise that ATBs are distinguishable from other categories of CHC, and because CARB has already determined that premise is not consistent with the evidence in the rulemaking record, CARB disapproves that element of the Petition.¹¹¹

Finally, the Petition requests that the ACE provisions be amended to allow alternative compliance strategies for ATBs to include emissions reduction measures related to potential emissions reductions attributable to emissions sources other than CHC, including cargo handling equipment, drayage trucks, and stationary sources.¹¹² The existing ACE provision expressly limits alternative compliance strategies to strategies involving CHC.¹¹³ As CARB staff already explained during the rulemaking process, this limitation is needed to ensure that "the quantified emission reductions in the ACE plan must occur in the harbor craft sector only, which ensures the emission reductions are achieved from CHC themselves."¹¹⁴ That explanation constitutes a rational explanation for limiting alternative compliance measures to measures involving CHC, and Petitioner does not provide a countervailing justification or reason why its proposal better effectuates the goals and purposes of the

¹⁰⁸ Cal. Code Regs, tit. 17, § 93118.5(f)(1)(G).

¹⁰⁹ Petition, p. 11.

¹¹⁰ *Ibid.*

¹¹¹ Please note that, as explained above, the existing ACE provision does allow an applicant to propose alternative compliance strategies that consideration of emissions reductions in more than one air basin. Cal. Code Regs., tit. 17, section 93118.5(f)(1)(G). Applicants must submit information that the proposed ACE will not result in higher emissions burden to DACs relative to other communities impacted by their vessel operations. Cal. Code Regs., tit. 17, section 93118.5(f)(1)(F)5.

¹¹² Petition, p. 12.

¹¹³ Cal. Code Regs., title 17, § 93118.5(f)(1)(E).

¹¹⁴ 2022 CHC ISOR, p. IV-99.

2022 CHC Regulation or its authorizing statutes. CARB therefore disapproves this element of the Petition.

The Petition's basis for proposing the amendments does not demonstrate that the proposed amendments are consistent with CARB's overall statutory charge to improve air quality, to protect the public health and welfare, and to mitigate the harms posed by greenhouse gases by controlling emissions from marine vessels. It also fails to demonstrate that the proposed amendments are reasonably necessary to effectuate the purposes of those statutes, or that the proposed amendments are consistent with the 2022 CHC's Regulation's rationale that emissions reductions resulting from a proposed ACE plan must only encompass emissions from the CHC sector, to ensure that sector will implement actions to reduce emissions from CHC.

Conclusion

Based on the foregoing analysis of the Petition, CARB finds that the Petition does not present any information that significantly differs from the information presented to and considered by the Board in its consideration of either the 2010 CHC Regulation, the 2020 At Berth regulation, or the 2022 CHC Regulation. CARB additionally finds that Petition has not demonstrated that the proposed amendments are consistent with the CARB's overall statutory charge to improve air quality, to protect the public health and welfare, and to mitigate the harms posed by greenhouse gases by expeditiously controlling emissions of harmful air pollutants from marine vessels; or that the proposed amendments are not reasonably necessary to effectuate the purposes of those authorizing statutes.¹¹⁵

Therefore, the Petition is denied pursuant to Government Code section 11340.7.¹¹⁶ The record upon which this denial is based includes the Petition and all of the material incorporated by reference in the Petition - Exhibits A through G and the Navigistics Report referenced in the Petition and transmitted to CARB by a separate letter. The record also includes this letter and all attachments hereto.

In accordance with Government Code section 11340.7(d), a copy of this letter is being transmitted to the Office of Administrative Law for publication in the California Regulatory Notice Register. You have cited the following as authority for the requested action:

¹¹⁵ See Cal. Gov. Code § 11350(b)(1), which provides that a regulation may be declared invalid if "[t]he agency's determination that the regulation is reasonably necessary to effectuate the purpose of the statute that is being implemented, interpreted, or made specific by the regulation is not supported by substantial evidence."

¹¹⁶ The Board may delegate any duty it deems appropriate to its Executive Officer (Health and Safety Code section 39515(a)). Moreover, the Board is conclusively presumed to have delegated any of its powers to the Executive Officer unless it has expressly reserved that power to itself (Health & Safety Code section 39516). The Board has not reserved the power to act on rulemaking petitions, and it is therefore appropriate for me to consider the Petition pursuant to my delegated authority.

Matthew Vafidi
September 5, 2023
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California Government Code section 11340.6, and California Health & Safety Code sections 38505 et. seq., 39650 et. seq., 39666, 39730 et. seq., 41511, and 43013 et. seq.

The agency contact person on this matter is Alex Wang, Senior Attorney, at Alex.Wang@arb.ca.gov or Rebecca Maddox, Senior Attorney, at Rebecca.maddox@arb.ca.gov or (279) 208-7692. Interested parties may obtain a copy of the Petition from Katie Estabrook, Staff Services Manager of the Clerk of the CARB Board, by writing to 1001 I Street, P.O. Box 2815, Sacramento, California 95812, Katie.Estabrook@arb.ca.gov or (916) 322-5594.

Sincerely,



Steven S. Cliff, Ph.D., Executive Officer

Enclosure

cc: (via email only)

Liane M. Randolph, Chair. California Air Resources Board

Ellen M. Peter, Chief Counsel, California Air Resources Board

Edie Chang, Deputy Executive Officer, California Air Resources Board