

EXHIBIT F



June 2, 2022

By Mail and by Electronic Submittal

Clerk's Office
California Air Resources Board
1001 I Street
Sacramento, CA 95814
(<https://www.arb.ca.gov/lispub/comm/bclist.php>)

**Re: Proposed Amendments to the
Commercial Harbor Craft Regulation**

California Air Resources Board:

Introduction

On behalf of Crowley Maritime Corporation ("Crowley"), we thank you for the opportunity to comment on the 15-day changes to the Commercial Harbor Craft Regulation ("CHC Regulation") that are proposed by California Air Resources Board ("CARB") in accordance with Resolution 22-6, adopted by the CARB Board on March 24, 2022. As the largest operator of Jones Act tankers and articulated tug barges ("ATBs") in the United States, including in California, Crowley is directly affected by the CHC Regulation. Crowley fully supports the environmental goal of the CHC Regulation, nevertheless, Crowley's ATBs – in particular those larger, coastal tanker-sized ATBs with EPA Category 3 engines -- cannot comply with the CHC Regulation, which, in its current form, is fatally flawed.

Crowley is a leader of the U.S. maritime industry in sustainability and environmental innovation.¹ As an integral part of its mission, Crowley has committed to net-zero greenhouse gas emissions from its operations by 2050, which will reduce overall annual emissions by 4.2 million metric tons of greenhouse gases ("GHG"), or the equivalent of removing more than 900,000 cars from the road every year. Among Crowley's sustainability programs are the development of a GHG emissions monitoring and modeling platform that will provide benchmarking, transparency and customized disclosures, the introduction of an all-electric tugboat², and

¹ Crowley announced May 26, 2022, that it received the U.S. Coast Guard Rear Admiral William M. Benkert Marine Environmental Protection Award. The award recognizes businesses involved in marine vessel operations for outstanding achievements in all aspects of marine environmental protection. Crowley received the Osprey designation, the Benkert Award program's highest distinction.

² Crowley invested \$18 million to build this first zero-emissions electric tug in the United States. The e-tug will operate at the Port of San Diego's Tenth Avenue Marine Terminal and will be operational by mid-2023. Over the first 10 years of its use, its operation will reduce 178 tons of nitrogen oxide, 2.5 tons of diesel particulate matter, and 3,100 metric tons of carbon dioxide versus a conventional tug. Furthermore, this innovating vessel will eliminate the need for the fuel required of a traditional tug - 30,000 gallons (114,000 liters) of diesel every year.

development of alternative energy vessels and offshore wind services, and more sustainable fuels. To achieve our goals of decarbonization and climate action, Crowley is working collaboratively with partners in industry, government and non-governmental organizations to lay the groundwork for a clean energy future³.

Why This Comment is Relevant: The Proposed Amendments Do Not Meet the Board's Directive

This comment addresses a broader issue than the obstacles to compliance with the CHC Regulation that are confronted by Commercial Passenger Fishing Vessels. The 15-day changes are based upon the directive of Resolution 22-6. Resolution 22-6 directs the CARB Executive Officer (E.O.) to "[w]ork with stakeholders to identify and to provide information needed to assist regulated entities in complying with" the CHC Regulation. Contrary to the restrictive interpretation adopted by CARB staff in the preamble to the Proposed Amendments, that directive is not limited only to potential incentive program opportunities and technical documentation.

In solely addressing the concerns of only one set of stakeholders, the current 15-day changes **do not go far enough** in meeting the more general directive of Resolution 22-6. The current 15-day changes process offers CARB an opportunity, as directed by Resolution 22-6, to work with Crowley to address meaningful alternative compliance pathways for ATBs. Given the dire consequences, outlined below, of failing to recognize the unique nature of Crowley's ATBs as oceangoing tank vessels, CARB should act upon this opportunity now.

As discussed herein, Crowley's ATBs cannot, as a practical and economic matter, effectively comply with the CHC Regulation. CARB has arbitrarily and mistakenly classified Crowley's ATBs as commercial harbor craft, instead of properly recognizing that these larger ATBs are oceangoing tank vessels, functionally equivalent to oceangoing tankers that are regulated under the At-Berth Rule. Resolution 22-6, interpreted fairly, requires CARB Staff to work with Crowley to find a solution to this issue. Crowley submits that it is incumbent upon CARB Staff to recognize and cure this arbitrary mistaken categorization.

The Issue: ATBs Are Unique

An ATB is an innovative, highly efficient, and flexible form of modern oceangoing tank vessel. Moreover, Crowley's fleet of Jones Act ATBs are one of the keys to unlocking the energy transition in the State of California for our future energy needs, to include safe and reliable marine transportation of zero or low emission and renewable fuels and biofuels that will be refined and blended in California and to facilitate the transition away from conventional fossil fuels.

For the past 3 years, Crowley has worked diligently to educate CARB and its Staff regarding the nature and operational profile of larger ATBs. As oceangoing coastwise tank vessels, Crowley's ATBs carry 15% of the clean petroleum products annually transported to and from California and a larger proportion of the bulk liquid energy that is transported between California ports. Crowley's ATBs of more than 120,000 bbl. capacity are unquestionably the functional equivalent of oceangoing tankers. Crowley's fleet of ATBs operating in California range in cargo capacity from about 155,000 bbls to 178,000 bbls. Crowley operates seven of the nine Jones Act ATBs currently operating on the U.S. West Coast and trading in the California market: three 550 Class ATBs (e.g., Sea Reliance/550-1, Sound Reliance/550-2, and Ocean Reliance/550-3), three 650 Class (e.g., Vision/650-10, Gulf Reliance/650-2 and Commitment/650-6, and a newer ATB (e.g., The Aveogan/Oliver Leavitt) that is currently operated primarily in the Alaska market.

The fallacy of including larger ATBs, particularly coastal tanker-sized ATB units with EPA Category 3 main engines, in the regulation of Commercial Harbor Craft is derived from a misconception, adopted at an early

³ The e-tug project is also an example of Crowley's collaborative partnerships with a broad array of stakeholders including the West Coast Collaborative, DERA, MARAD, the San Diego County APCD, and CARB, in the pursuit of commercially viable solutions to the current climate and air quality crises. The e-tug will act as a beacon of transformation across American ports, reducing both greenhouse gas and other air emissions (e.g., PM2.5, PM10, NOx, SOx) that have impacted communities and ecosystems proximate to U.S. port infrastructure. The development of this future-focused technology is not just an example of what is possible: it represents the next generation of clean-tech assets that will be deployed to Californian and American ports over the coming decade.

stage of CARB's rulemaking process, that ATBs are "a barge and a tug separately." During operations in California waters, which include transit, maneuvering, at anchor and operations at berth, Crowley's large seagoing ATBs do not detach the tug from the barge and the tug does not come out of the notch of the barge. At berth, such ATBs function as a one-unit oceangoing tanker. Based on their California operations, Crowley's ATBs should not be "considered a barge and a tug separately" as they are under the amended CHC rule, and are not defined as such, even by CARB itself, under its At Berth Rule, which recognizes that an "Articulated tug barge" means a tanker barge that is mechanically linked with a paired tug that functions as one vessel." (Cal. Code Regs. Tit. 17, § 93130.2).

Therefore, it is critically important that ATBs be properly regulated under the At-Berth Rule. Alternatively, if ATBs are to be included in the CHC Regulation, under the current arbitrary and mistaken definition of ATBs as commercial harbor craft, Crowley should be able to comply with the regulation using an Alternative Control of Emissions ("ACE") plan that is consistent with the operational profile of ATBs as oceangoing vessels.

CARB Staff Must Act on the Board's Directive to Recognize the Unique Nature of ATBs

CARB's Board has resolved to recognize the unique nature of ATBs in the CHC Regulation. On August 27, 2020, CARB adopted Resolution 20-22, which included the following:

BE IT FURTHER RESOLVED that the Board directs staff to continue to engage the articulated tug barge (ATB) industry to determine the best options for cost-effective emission reductions that recognize the unique nature of ATBs as CARB updates the commercial harbor craft regulation.

That Resolution directed CARB Staff, in developing the CHC Regulation, to address the "unique nature of ATBs," and to focus on achieving emissions reductions that are cost-effective for ATBs.

Resolution 22-6, under which the current 15-day Changes are proposed, offers CARB a further opportunity to work with Crowley to address the unique nature of ATBs and develop an achievable ACE plan for ATBs under the CHC Regulation.

Compliance with the Current CHC Regulation is Practically impossible for Crowley's ATBs

The CHC Regulation, as currently formulated, effectively requires that Crowley replace every in-use engine on an ATB with a Tier 3 or Tier 4 engine that meets CARB performance standards, which are likely to include diesel particulate filters (DPF). This is simply not feasible. To comply with the CHC Regulation, Crowley would be required to make substantial expenditures of such a magnitude that the ATBs would be rendered uneconomical to operate.

A retrofit of the engines on Crowley's ATB fleet, to comply with these requirements, would be around **\$9.55M** per 550-class ATB (155,000 bbl. capacity) and about **\$8.75M** per 650-class ATB (178,000 bbl. capacity).

On a fleet-wide basis, the retrofit cost is estimated to be **\$38.2M** for the 550 fleet, and **\$87.5M** for the 650 fleet, a total of **\$125.7M**.

The cost of replacing new engines in the vessels, to comply with the mandate of the CHC Regulation, would be even higher. Crowley estimates that the replacement cost for the 550-class ATBs would be **\$90M** per vessel or **\$360M** for the entire 550-class Crowley fleet. The replacement cost for the 650-class ATBs would be **\$105M** per vessel or **\$1,050M** for the entire 650-class Crowley fleet.

Were Crowley to replace the vessels in its ATB fleet to comply with the requirements of the proposed CHC Regulation Amendments, the total estimated cost would be **\$1,410M**.

Under the circumstances, the cost of an engine retrofit or replacement for Crowley's ATB fleet in order to continue trading in California is prohibitive. Simply put, the cost of complying with the amended CHC rule renders Crowley's large ATBs uneconomical and, therefore, constitutes a ban on their use in regulated California waters.

It should also be noted that, at 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 grave consequences such as fire danger, there is no indication that DPFs can be used on large marine (Category 3) engines, or that it would be safe to do so.

Since an engine retrofit or the replacement of the vessels in the Crowley ATB fleet will not be commercially feasible, the CHC Regulation will effectively drive Crowley's ATBs out of California.

Forcing Crowley's ATBs Out of California Will Have Dire Consequences

It is crucially important that CARB and CARB Staff understand the implications of not amending the CHC Regulation to recognize the unique nature of ATBs.

Under the currently-worded CHC Regulation, Crowley's ATBs will no longer be available to carry clean petroleum products in the Jones Act trade between ports on the U.S. West Coast. Shippers in the clean petroleum product trade with California, without the option to use Crowley ATBs, will then be forced to charter medium range tankers, if they are available, to carry such products to, from and between California ports. This would have a substantial adverse impact on the interstate commerce in clean petroleum products, and will increase the cost of fuel paid by California consumers.

ATBs are not only a flexible, safe, efficient and cost-effective transportation option for the carriage of clean petroleum products, but they are also more beneficial to the environment than their oceangoing tank vessel equivalents. Crowley's ATBs voluntarily operate in California using CARB Ultra Low Sulphur Diesel, with a maximum sulphur content, 15 ppm, that is far below the acceptable level for fuels burned by oceangoing tank vessels within the ECA and at berth. See, 13 Cal. Code of Regs., §2299.1(e). Although Crowley's large ATBs operate with Category 3 engines that, in terms of engine displacement, are of a similar scope to oceangoing tank vessels, the emissions from Crowley's ATBs are generally far lower. It should also be noted that the renewable diesel, R100 or R99, fuel requirement of the CHC Regulations does not apply to oceangoing tank vessels that would replace Crowley's ATBs in the California clean petroleum products trade if the CHC Regulations are not amended.

Under the circumstances, we submit that the result of the CHC Regulation forcing Crowley's ATBs to cease operating in California will be their replacement by oceangoing tankers, with a resulting net **increase** in air pollution. The dire consequences of the CHC Regulation, if not further amended, will be substantial and prejudicial for Californians.

If, after Crowley ATBs are driven from California by an unamended CHC Regulation, Jones Act tankers are unavailable or found to be uneconomical for the carriage of clean petroleum products to California, Californians may be required to resort to foreign oil to supply California refineries. Such a shift to foreign vessels and foreign oil will have a severe impact on West Coast refineries currently supplying clean petroleum products to California carried in ATBs, and will jeopardize jobs in Washington and Oregon as well possibly substituting foreign refiners and blenders for the development and supply of the burgeoning renewable fuels and bio-fuels industry in California.

It is, therefore, far from inconceivable that, when it comes to the impact of the CHC Regulation on ATBs, the impact of the regulation for California will be increased consumer costs, increased reliance on foreign oil, increased costs, increased pollution, loss of jobs and an untenable legal patchwork applying to California's commerce with other states.

The Way Forward: Achievable and Specific Alternative Compliance Pathways

The only way that the mandate of Resolution 22-6 and Resolution 20-22 can be met is for Crowley and the CARB staff to work together to amend the CHC Regulations, specifically by developing ACE pathways that are achievable by, and specific to, seagoing ATBs. This 15-day changes process provides CARB Staff the best opportunity to do so.

CARB Staff should begin by recognizing that larger ATBs are oceangoing tank vessels that have the same operational profile of tankers, and should be regulated under the same rules as apply to tankers.

The current wording of section 93118.5(f)(1)(E) contains the limitation that, "AECS [alternative emission control strategies] may only apply to emissions from harbor craft subject to this section, and may not apply to other mobile or stationary source categories." CARB Staff has explained to Crowley that the reasoning behind this provision is that emissions from harbor craft could not be "located" to a specific area due to the nature of their operations. Therefore, as Crowley understands this provision, AECS could not be achieved by alternative control projects in the vicinity of terminals, etc., as is permitted in the At-Berth Rule.

As the functional equivalent of oceangoing tankers, seagoing ATBs have a near-identical emissions profile to oceangoing tank vessels in connection with enabling those emissions to be "located" to a specific area due to the nature of their operations. In California harbors, Crowley's ATBs do not operate as commercial harbor craft; instead, they transit from sea, maneuver, anchor and conduct cargo operations at berth, like any other oceangoing tank vessels. Crowley's ATBs load and unload cargoes at the same California terminals used by other oceangoing tank vessels. There is no reason that, as with the rule applying to tankers, it is not possible to "locate" the emissions from Crowley's ATBs, just as it is possible to "locate" the emissions from other oceangoing tank vessels regulated under the At-Berth Rule. Inclusion of the ability to undertake AECS involving other stationary or mobile source categories in the vicinity of the terminals where ATBs trade would be a positive step in recognizing the unique nature of ATBs.

The restriction, in Section 93118.5(f)(1)(G), of ACES to a single specified air basin (or other defined geographic area as approved by the E.O., also poses particular challenges to ATBs. Crowley's ATBs do not operate in only one specific air basin. Like their oceangoing tank vessel counterparts, Crowley's ATBs operate in multiple air basins and between regulated air basins. Unlike harbor ship assist tugs and other commercial harbor craft, such as ATB bunkering vessels, Crowley's large seagoing ATBs are operated by Crowley for energy producer, refiner and trading customers in accordance with charter party (lease contract) terms and conditions. Under those contracts, Crowley's customers direct the ATBs use and scheduling the ATBs voyages. Therefore, Crowley does not control in which air basin the ATBs operate. In this respect, ATBs are also like many oceangoing tank vessels calling in California. As the CHC Regulations are currently drafted, when taking into account their trading patterns, ATBs face an insuperable challenge in obtaining E.O. approval of an AECS covering the entirety of California regulated waters.

These are further examples of the CHC Regulation not addressing the uniqueness of ATBs and their functional equivalence to oceangoing tank vessels. In this respect, CARB staff are not abiding with the CARB Board's directive in Resolution 20-22 to "engage the articulated tug barge (ATB) industry to determine the best options for cost-effective emission reductions that recognize the unique nature of ATBs."

Specifically, we suggest that Section 93118.5(f)(1)(E) of the CHC Regulations needs be amended to include more specific plans, developed with Crowley and the few or less other seagoing ATB operators, that will enable eligible oceangoing ATBs to comply with the emissions reduction goal of the regulation and remain operating in California as markets dictate.

One method that should be considered by CARB is to amend the CHC Regulation to provide for an ACE pathway that applies to ATB units over a certain gross regulatory tonnage ("GRT") or a have a certain category

of main engine (i.e. Category 3); such a provision would recognize that those larger seagoing ATBs are functionally the equivalent of oceangoing tank vessels and bear no operational similarity to other, much smaller commercial harbor craft, including bunkering ATBs, regulated by the CHC Regulation. Crowley would be willing to work with CARB Staff on a suitable amendment that would set a GRT applicability range for a broader menu of AEC pathways for significantly larger ATBs, with fixed sailing routes, falling under the CHC regulation.

Crowley notes that the tug on the 650 Class ATBs is 465 GRT, and its barge has a GRT of 11,147; the tug on the 550 Class ATB is 248 GRT, and its barge is 9,810 GRT. The combined GRT of the entire ATB is on par with oceangoing tank vessels calling at the same terminals⁴.

Crowley has previously submitted to CARB Staff several ACE proposals that would be reasonable and achievable for ATBs to meet the overall emissions reduction required by the CHC Regulation. Crowley stands willing and ready to continue to work with CARB Staff to amend the CHC regulations to include such achievable AEC options for ATBs.

CARB Should Take this Opportunity Now

Crowley submits that CARB Staff should now take this opportunity to adhere to the broader directive of Resolution 22-6. In addition to the particular compliance issues confronted by Commercial Passenger Fishing Vessels, CARB Staff should address the acute obstacle to compliance with the CHC Regulation faced by larger ATBs, as oceangoing vessels.

Crowley recognizes that CARB Staff might prefer to issue the CHC Regulation at this stage and later address a specific regulatory amendment, in accordance with section 11340.6 of the Government Code, to address ACE plans for ATBs. We submit, however, that it would be more efficient for CARB to avoid delaying taking up the required amendments to the ACE provisions of the CHC Regulation for ATBs.

Resolution 22-6 gives CARB Staff the opportunity to act now, and it should do so.

Since the legality of the CHC Regulation will depend on authorization from the EPA Administrator under 42 U.S.C. §7543(e)(2)(A), it would make sense for CARB to amend the CHC Regulation and remove one significant issue from the public hearing process relating to approval.

As currently worded, the CHC Regulations contemplate a proposed regulation of ATBs as harbor craft that is inconsistent with the federal regulatory scheme and regulations of other jurisdictions. Furthermore, while we recognize the in-use exception under the Clean Air Act gives California added flexibility to regulate ATBs, those larger coastal tanker sized ATB units with Category 3 engines of per cylinder displacements above 30 liters are regulated as oceangoing vessels under numerous applicable federal regulations, subjecting them to domestic and international emission and design and engineering control specifications. If the CHC Regulation, in its current form, were approved by the EPA, large seagoing ATBs and self-propelled tank vessels would face significantly different emissions control requirements in California, despite performing the same function, discharging comparable levels of cargo, having an identical operational profile, and being regulated as oceangoing vessels when they operate outside California.

We would submit that this alone, while maybe not determinative of a federal preemption issue, presents serious legal issues going forward for U.S. Coast Guard and EPA regulatory oversight of the U.S. domestic maritime industry and is a major threat to U.S. maritime regulatory uniformity especially with respect to any ongoing efforts by the State Department and Coast Guard to manage harmonization of any future changes to MARPOL ANNEX VI with domestic implementing laws.

⁴ATBs are thus significantly larger than the other commercial harbor craft regulated by the CHC Regulation.

As internationally certificated vessels, Crowley's ATBs operate with engines that are governed by IMO MARPOL Annex VI Engine International Air Pollution Prevention ("EIAPP") and International Air Pollution Prevention ("IAPP") requirements. Any deviations from the conditions of certification require formal approval of the vessels' flag state and Classification Society. For this additional reason, Crowley submits that CARB should now reconsider whether it is preferable to regulate ATBs under the At-Berth Rule, instead of seeking to regulate the type of engines that ATBs operate, under the CHC Regulation.

Crowley's ATBs Should Not be Driven Out of California

As an industry stakeholder committed to the reduction of emissions from marine vessels, Crowley has actively worked with CARB for several years to help develop regulations that will not only achieve CARB's goals but will also enable Crowley's ATBs to continue to operate in California.

For years, Crowley has advocated the sensible solution of including larger capacity ATBs, which are the functional equivalent of an oceangoing tank vessel, in the At-Berth Rule. The regulation of ATBs like other oceangoing tank vessels is sensible and fair commercially, because self-propelled bulk liquid tankers – many of which fly foreign flags of convenience to escape many of the requirements of U.S. environmental and regulations – are ATBs' competition in interstate and international commerce. To regulate such tankers under the CARB At-Berth Rule and regulate Jones Act ATBs under the CHC Regulation is unjustifiable.

Crowley has also worked with CARB to clarify that the operational profile of ATBs, entering California ports from sea, transiting to terminals, unloading or discharging cargo, and departing ports for sea, and has demonstrated that the operations of ATBs are distinct from harbor craft. Crowley has shown why, if, despite their unique nature and operations, ATBs are to be arbitrarily defined by CARB as commercial harbor craft, the CHC Regulation should include ACE plans specifically developed for and achievable by ATBs.

Crowley has shown its dedication to the a clean energy future, through its sustainability and environmental innovation program. Crowley is working to decarbonize its operations, while also working on key legislative initiatives such as the incorporation of oceangoing vessels, such as our large ATB's with Category 3 Engines, into the Environmental Protection Agency's renewable fuel standard regulations for parity with rail, trucking and aviation transportation modes. Crowley is specifically working towards an improved environment in California, and has chosen to operate its e-tug in California and, moreover, voluntarily uses CARB Ultra Low Sulphur Diesel in its ATBs.

Crowley stands ready and willing to work with the State of California with a view to the development of ACE plans for large seagoing ATBs to achieve equivalent or greater emissions reductions than would result from vessel engine retrofitting or replacement. We submit that this is what is precisely contemplated by the CARB Board and reflected in the mandates to CARB Staff contained in Resolution 22-6 and Resolution 20-22, when read together.

Conclusion

There can be no justification for issuing a regulation that effectively excludes Crowley's ATBs from the State of California, when reasonable alternatives exist. ATBs may either be included in the At-Berth Rule or, if they are to be included in the current definition of harbor craft (despite the mistaken basis for doing so), the CHC Regulation must be amended to include achievable ACE plans and pathways for ATBs.

The CHC Regulations, while attempting to be comprehensive, do not properly and fairly take into account the operational and commercial realities faced by the regulated industry. When it comes to implementing such regulations, it becomes apparent that compliance by some of the regulated industry is simply impossible.

It is manifest that inclusion in the At-Berth Regulation remains the most sensible way to regulate emissions from larger ATBs, which function and should be regulated as other oceangoing tank vessels. But as an

alternative, and to permit Crowley's ATBs to continue to operate in California, we respectfully submit that CARB Staff should further amend the current 15-day changes to the CHC Regulation to include a provision that CARB will work with Crowley to develop ACE Plans that are available to and achievable by larger, seagoing, ATBs.

Yours respectfully,

CROWLEY MARITIME CORPORATION

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