



October 14, 2020

Via electronic mail

Catherine R. McCabe
Commissioner
New Jersey Department of Environmental Protection
401 East State Street
P.O. Box 402
Trenton, NJ 08625-0420

Re: Ocean-Going Vessels, Harbor Craft, and Cargo Handling Equipment, NJ PACT Stakeholder Meetings, September 16, 2020

Dear Commissioner McCabe,

On September 16, the NJDEP hosted stakeholder meetings to discuss California's current efforts to update emissions standards for ocean-going vessels and harbor craft as part of the NJ Protecting Against Climate Threats (PACT) process. The agency also hosted a discussion on regulatory concepts around cargo handling equipment in marine terminals and airports. On behalf of its members, New Jersey Sierra Club hereby submits additional feedback on some of the questions raised at those meetings, including on lead time, regulated parties, implementation and enforcement issues.

I. Background

Transportation is the largest source of climate pollution in New Jersey, accounting for 42 percent of the state's greenhouse gas emissions. The Port Authority of New York and New Jersey manages marine terminals in Newark, Elizabeth, and Bayonne, and the South Jersey Port Corporation (SJPC) operates marine terminals in Camden, Paulsboro, and Salem. Traffic in the marine terminals produces high levels of climate and criteria air pollution. Greenhouse gas emissions from ocean-going vessels represent one quarter of emissions from the heavy-duty and locomotive sector in the state. These vessels emit NOx, PM, diesel particulate

matter, reactive organic gas, and black carbon, pollutants that harm public health. Container ships are by far the largest source of NO_x, particulate matter, VOCs, SO₂, and CO₂ pollution in the state, followed by cruise ships, auto carriers, and tankers. The Port Authority has estimated that climate and criteria air pollution emissions (in particular CO₂ and NO_x) resulting from ocean-going vessel emissions at berth adversely affect populations in Essex, Hudson, Monmouth, and Union County in New Jersey (as well as Kings, Queens, and Richmond County in New York). These vessels affect, in particular, the health and environment in overburdened communities living in proximity to the ports.

Cargo handling equipment at marine terminals and airports is also a significant source of pollution in the state. Equipment includes yard trucks, top handlers, side handlers, reach stackers, forklifts, rubber-tired gantry cranes, dozers, excavators, loaders, and railcar movers. In New Jersey, terminal tractors, straddle carriers, forklifts, and rubber-tired gantry cranes represent the largest share of NO_x, PM, and CO₂ from cargo equipment. Pollution from cargo handling equipment thus also contributes to harmful pollution that causes respiratory illnesses and increased cancer risk, in particular for port communities.

New Jersey is required by statute to reduce GHG emissions 80 percent below 2006 levels by 2050. Under the New Jersey Master Plan, the state has committed to maximize the decarbonization of the transportation sector by 2050. With respect to ocean-going vessels, in October 2009, the Port Authority published recommendations to reduce emissions from goods movement operations 3 percent annually during a period of ten years. In addition, in 2018 the Port Authority set ambitious greenhouse gas reductions targets of at least 25 percent reductions by 2025 and 80 percent by 2050 for both marine and aviation operations. Further, the North American Emissions Control Area (ECA) requires vessels to burn low sulfur fuel while transiting within 200 nautical miles of the North American coast.

Currently, the NJDEP, with the Port Authority and the New York State Department of Environmental Conservation, is formulating an emissions reduction plan for polluting sources at marine terminals. As part of this plan, New Jersey is looking at current regulatory efforts to reduce pollution at ports by the California Air Resources Board (CARB). Therefore, in the context of the NJ PACT stakeholder discussion, the NJDEP is seeking comment on the possible adoption of California's At Berth rule to secure significant pollution reductions from large vessels such as container ships and tankers, as well as the Commercial Harbor Craft regulation to address emissions from tug and tow vessels. The NJDEP is also considering whether to adopt California's Cargo Handling Equipment Rule and the Zero-Emission Ground Support Equipment Regulation after CARB finalizes them.

Sierra Club strongly supports the adoption of these regulations by the NJDEP as soon as CARB undertakes its own statutorily-required requests to EPA for waivers of Clean Air Act preemption to enforce these regulations. We also strongly encourage the NJDEP to work with its sister agencies on crafting policies that provide incentives for these sources to reduce their emissions

in order to promote the development of zero emission technologies and reduce any need for additional lead time for compliance once the agency has adopted these regulations.

II. Adopting California's regulations under Section 177 of the Clean Air Act

Section 177 of the Clean Air Act authorizes any state that has an approved NAAQS implementation plan to adopt and enforce emission standards for new motor vehicles or new motor vehicle engines that are identical to California's standards for which EPA has granted a waiver. The state must adopt such standards at least two years before commencement of the relevant model year. 42 U.S.C. § 7507.

The NJDEP can incorporate California's emission standards by reference since 2006. The New Jersey Air Pollution Control Act provides that all applicable new California regulations are adopted into this subchapter by this automatic process. N.J. Admin. Code § 7:27-29.13(b).

The California Air Resources Board (CARB) first regulated emissions from ocean-going vessels in 2007. The existing regulation covers three vessel categories (container ships, passenger ships, and refrigerated-cargo ships) at six California ports (Los Angeles, Long Beach, Oakland, San Diego, San Francisco, and Hueneme). Compliance requirements, which include emission or power reduction requirements and visit requirements, began in 2014 and were phased over time so as to reach 50 percent emissions reductions by 2015 and 80 percent emissions reductions by 2020 (around 4000 visits). In late August, CARB approved a new emission standard for ocean-going vessels that would regulate additional vessels and additional ports and terminals to achieve greater emissions reductions in port communities, as well as to secure further NO_x and PM reductions to meet the state's and regional ambient air quality standards. The new regulation will take effect in 2023, but roll-on/roll-off vessels will need to comply beginning in 2025 and tankers will begin compliance in 2025 in some ports (Los Angeles and Long Beach) and 2027 in others (Northern California). CARB has estimated that, when fully implemented, the regulation will achieve a 90 percent reduction in pollution and 55 percent reduction in potential cancer risk for port communities in Los Angeles, Long Beach, and Richmond.

Separately, in 2007 CARB adopted a Commercial Harbor Craft (CHC) regulation to reduce emissions of diesel PM, NO_x, and ROG from diesel engines used on commercial harbor craft operated in California waters (within 24 nautical miles of the California coast). The rule was amended in 2010 and will be fully implemented by the end of 2022. The agency is currently developing additional amendments to evaluate the feasibility of Tier 4 engine technology and advanced retrofit emission control devices. The proposed requirement is a standard equivalent to Tier 3 or 4 (if certified) plus diesel particulate filter if below 600 kW or Tier 4 plus filter if above 600 kW. The agency is also exploring the feasibility of including hybrid and zero emission control technologies as part of the framework to reduce emissions from some of these vessels.

Further, in 2005 CARB approved a regulation to reduce emissions from mobile cargo handling equipment vehicles operating at California's ports and intermodal rail yards. This regulation, which requires the installation of best available control technology (BACT) for these vehicles, took effect in 2006 and was fully implemented by the end of 2017. CARB is currently assessing the availability and performance of zero-emission technology to further reduce emissions from this equipment. CARB is also considering regulations to promote the development and use of zero-emission airport ground support equipment (airport GSE). CARB will consider whether to undertake this regulation at the end of 2020.

III. Waiver requirements

CARB finalized the California At Berth regulation in August 2020, but has yet to formally adopt it and request a waiver of preemption from EPA. While CARB has not yet filed this waiver request or made an announcement regarding this timeline, it might be possible for the NJDEP (and the NY State Department of Environmental Conservation, as it makes most sense for both agencies to promulgate these regulations simultaneously) to enact regulations that enter into effect soon after the California regulation does (2023). The NJDEP should thus begin its rulemaking processes promptly after CARB undertakes its required EPA waiver process. A strong regulation of emissions for ocean-going vessels like this one is greatly needed to address conventional and toxic pollution in port communities.

With respect to the Commercial Harbor Craft regulation, CARB has not yet indicated when it plans to finalize the regulation and submit a waiver to EPA, and thus would be premature for the NJDEP to begin a rulemaking process on this subject in the near term. Likewise, it would be premature for the NJDEP to undertake cargo equipment regulations in the near term as CARB has not yet commenced the relevant rulemaking processes. That said, Sierra Club appreciates that the NJDEP is holding these stakeholder conversations to increase awareness of the effects of port pollution, especially in overburdened communities, and the need for strong emissions regulations to address it.

For cargo handling equipment at marine terminals specifically, we suggest the NJDEP adopt CARB's eventual regulation to promote zero-emission equipment rather than to adopt the current Tier 4 regulation, which expired in 2017 and is now outdated.

In the meantime, the NJDEP and its sister agencies should continue to provide incentives or partner with private entities on demonstration projects for cargo handling equipment at marine terminals and airports (some of which might not be covered under a future CARB regulation, which is why the NJDEP has asked if its eventual regulation could cover all types of cargo handling equipment regardless of location). The New Jersey Energy Master Plan describes important examples of demonstration projects happening at present. For example, the Port Authority is working with airlines leasing terminal and airfield space at Newark Airport on electrifying baggage tucks and belt loaders using VW settlement funds, and also anticipates beginning a pilot project of electric cargo-handling equipment at the Elizabeth-Port Authority

Marine Terminal in partnership with Maher Terminals this year. SJPC's newest crane, the Kocks multi-purpose crane, is the first fully-electric crane at a New Jersey port.

Examples of incentive programs to reduce emissions include the Clean Vessels Incentive Program, which provides financial incentives to ocean-going vessels that comply with Vessel Speed Reduction and those that exceed current vessel emission standards set forth in the Environmental Ship Index. We strongly encourage the agency to prioritize available resources for this program. In addition, the Port Authority could provide incentives for zero-emission cargo handling equipment through lower airport access fees.

IV. Lead time

The NJDEP has asked for comment on how much lead time to provide if it adopts these regulations. When the NJDEP adopts the California regulations, the agency should only provide for two years' lead time, as required under Section 177 of the Clean Air Act.

When CARB issued the original At-Berth regulation, the agency gave regulated entities seven years to comply with the rule. However, in its most recent rulemaking it determined that the compliance schedule is both cost-effective and technologically feasible and, specifically, that both shore power and capture equipment technology, which are the main compliance mechanisms under the regulation, are now commercially available. Moreover, some vessel types will be required to comply until 2025 (ro-ro carriers) and 2027 (tankers), so the CARB regulation already builds in some additional lead time for compliance by certain vessel types.

For the Commercial Harbor Craft regulation, CARB is still in the process of gathering information from stakeholders, including on availability of efficiency technologies for certain craft such as tug vessels. The agency is also taking comment on whether to delay compliance for harbor craft that cannot implement Tier 4 requirements.

While at this moment rulemakings for harbor craft and cargo handling equipment would be premature, ideally the NJDEP should provide the required two-year lead-time while trying to ensure that the regulations enter into effect at the same time or soon after the California regulations so they follow similar interim compliance deadlines.

V. Regulated parties

The NJ DEP has also requested comment on the regulated entities under these regulations. The final At Berth regulation applies to owners, operators, or lessors of any U.S. or foreign-flag ocean-going vessel that visits a California port, terminal or berth, as well as to port, terminal or berth operators. In addition, the original At Berth regulation applies to container ships and cruises. The most recent At Berth regulation extends its application to several other types of vessels, including roll-on/roll-off carriers (i.e., auto carriers), tankers, and smaller fleets. All of these vessel types, in particular container ships, cruises, and tankers emit significant pollution in

New Jersey, which must be controlled. CARB has proposed that the Commercial Harbor Craft Regulation cover ferries, tug vessels, passenger fishing, excursion, dredge, barge, crew supply vessels, and workboats. Tug vessels are a priority for regulation by the NJDEP.

For cargo handling equipment, CARB has not yet proposed any regulatory requirements. The NJDEP has requested comment on whether this regulation should apply to all cargo handling equipment in the state, regardless of location, and whether to define equipment types (yard tractors, hostlers, and jockey trucks for marine terminals and baggage tugs, tractors, and aircraft tractors for airports). NJDEP would only be able to regulate cargo handling equipment covered under the relevant CARB regulations and within the scope of the relevant EPA waivers. By way of example, the current CARB regulation for which EPA has approved waivers in the past covers cargo handling equipment (new yard trucks, new non-yard trucks, in-use yard trucks, and in-use yard truck equipment) at ports and intermodal rail yards only. The NJDEP should work with its sister agencies on policies that provide incentives for all cargo handling equipment to move to zero-emission technologies, regardless of location.

VI. Implementation issues and enforcement

The NJ DEP has also requested comment on implementation and enforcement issues with respect to the At Berth and Commercial Harbor Craft regulations. Under Section 177 of the Clean Air Act, New Jersey must adopt standards identical to California standards under an approved waiver, but has flexibility to impose its own enforcement mechanisms. The California At Berth regulation allows compliance with shore power or emissions capture. We strongly encourage the NJDEP to provide regulated sources with incentives (such as the Port Authority's Clean Vessel Incentive Program) to use shore power for compliance which, while more costly than emissions capture due to the need for retrofits, would substantially reduce GHG emissions and eliminate nearly all emissions from the regulated vessels. Because this mechanism would require large amounts of power available at berth, the NJDEP must enact this regulation in tandem with power sector regulations that provide incentives for renewable energy to ensure that the electricity fueling the vessels is renewable energy.

Note, however, that the final text of the regulation precludes compliance using an emissions control strategy other than shore power unless the vessel owner obtains approval from CARB through an executive order. Like with other California emission standards, the NJDEP does not itself have authority to certify new compliance mechanisms, but it can enforce emissions control measures set forth in CARB's Executive Orders. Emission control measures already set forth in Executive Orders have been approved already. The orders are available in the following website: <https://ww2.arb.ca.gov/berth-regulation-executive-orders>

New emission control strategies would be subject to approval by CARB, as set forth in the regulation. In sum, to receive CARB approval, a vessel owner must show that the proposed emission control strategy achieves emission rates of less than 2.8 g/kW-hr for NO_x,

0.03 g/kW-hr for PM 2.5, and 0.1 g/kW-hr for ROG for auxiliary engines. Specifically for tanker vessels with steam driven pumps, a vessel owner must demonstrate that the proposed emission control strategy achieves emission rates less than 0.4 g/kW-hr for NOx, 0.03 g/kW-hr for PM 2.5, and 0.02 g/kW-hr for ROG for tanker auxiliary boilers.

Moreover, the final regulation incorporates a compliance option called “innovative concepts,” which would allow regulated entities to use other options (subject to CARB’s prior approval), for up to five years, to achieve earlier or greater emissions reductions in port communities versus reducing emissions directly at berth. Those reductions must be real, quantifiable, verifiable, and enforceable conventional air pollution emissions reductions (with no increases in GHG pollution). Sierra Club supports direct emissions reductions from ocean-going vessels (and other polluting sources that affect overburdened communities), but we recognize that this compliance method would be adequate if sources need more time to comply and make the relevant investments in pollution control. The NJDEP could enforce concepts previously approved by CARB while the New Jersey electric power sector also becomes cleaner so shore power can be fully effective as an emissions reduction strategy to meet the New Jersey Master Plan goals.

Beginning in 2023, regulated vessels must report to CARB detailed information regarding visits, fuel, and relevant emissions control measures. This is an important development as the original at berth regulation provides for compliance through fleet-wide averages. Reporting on the basis of individual visits ensures compliance by individual vessels and addresses any concerns about certain types of vessels not existing as full-fledged fleets in the state.

With respect to the Commercial Harbor Craft regulation, for purposes of compliance CARB has proposed that covered vessels can comply through repowering or rebuilding engines to meet Tier 3 or 4 diesel engines plus installing a CARB verified Level 3 diesel particulate filter, install Tier 3 or 4 engines certified by the EPA with a filter from the original equipment manufacturer, or demonstrate that engines otherwise meet performance standard during normal operation. In addition, CARB has proposed incorporating requirements for new excursion vessels to incorporate hybrid technology and for new and in-use short run ferries (less than 3 nautical miles) to incorporate zero emission technology. Emission requirements would enter into effect in 2026 and 2027 respectively.

In addition, CARB is currently requesting comment on whether tug operators have data on enhanced efficiency diesel technology for new tug vessels. CARB is also requesting comment on whether to require harbor craft to report to CARB instead of self-report as these vessels currently do. Because CARB is still in process of developing the regulation and reducing emissions from these vessels is critical for New Jersey, Sierra Club will provide further comment on this issue at a later date.

Thank you for your consideration.

Sincerely,

Jeff Tittel

Director, New Jersey Sierra Club

145 West Hanover St., Trenton, NJ 08618

Phone: (609) 656-7612; Fax: (609) 656-7618

www.SierraClub.org/NJ