Chapter 2
Response to Comments

2.1 Distribution of the Recirculated DSEIR

The Recirculated DSEIR prepared for the LAHD was distributed to the public and regulatory agencies on September 28, 2018, for a 45-day review period. Approximately 59 printed and digital copies (CD) of the Recirculated DSEIR were distributed to various government agencies, organizations, individuals, and Port tenants. The LAHD conducted a public hearing regarding the Recirculated DSEIR on October 25, 2018, to provide an overview of the Revised Project and to accept public comments on the Revised Project and the environmental document.

Printed and digital copies of the Recirculated DSEIR were available for review at the following locations:

- Los Angeles Harbor Department, Environmental Management Division, 222 West 6th Street, Suite 900, San Pedro, CA 90731
- Los Angeles Public Library - Central Branch, 630 West 5th Street, Los Angeles, CA 90071
- Los Angeles Public Library - San Pedro Branch, 931 South Gaffey Street, San Pedro, CA 90731
- Los Angeles Public Library - Wilmington Branch, 1300 North Avalon, Wilmington, CA 90744

In addition to printed copies of the Recirculated DSEIR, digital copies were made available in response to specific requests. Due to the size of the document, the digital copies were prepared as a series of PDF files to facilitate downloading and printing. Members of the public were also invited to request a CD containing the Recirculated DSEIR. Digital copies of the Recirculated DSEIR on CD were available free of charge to interested parties. The Recirculated DSEIR was available in its entirety on the Port web site at https://www.portoflosangeles.org/environment/environmental-documents.

2.2 Comments on the Recirculated DSEIR

The public comment and response component of the CEQA process serves an essential role. It allows the respective lead agencies to assess the impacts of a project based on the analysis of other responsible, concerned, or adjacent agencies and interested parties, and it provides an opportunity to amplify and better explain the analyses that the lead agencies have undertaken to determine the potential environmental impacts of a project. To that extent, responses to comments are intended to provide complete and thorough explanations to commenting agencies and individuals, and to improve the overall understanding of the Project for the decision-making bodies.

The LAHD received ten comment letters on the Recirculated DSEIR during the public review period. One verbal comment was received at the public hearing. Table 2-1 presents a list of those agencies, organizations, and individuals who commented on the Recirculated DSEIR; one letter (NRDC DSEIR) commenting on the Draft SEIR released in 2017 is included because the same entity's letter commenting on the Recirculated DSEIR requested that their earlier comments be incorporated.

Table 2-1: Public Comments Received on the Recirculated DSEIR

Letter Code	Date	Individual/Organization	Page
State Government			
SCH-1	19 November 2018	Scott Morgan State Clearinghouse Governor's Office of Planning and Research	2-27
Regional and Local Government			
SCAQMD	30 November 2018	Jillian Wong, Ph.D. Planning, Rule Development & Area Sources South Coast Air Quality Management District	2-28
BOS	22 October 2018	Ali Poosti Wastewater Engineering Services Division Los Angeles Bureau of Sanitation	2-45
Organizations			
CFASE	16 November 2018	Jesse Marquez Coalition for a Safe Environment et al.	2-46
CSPNC	13 November 2018	Alexander Hall Central San Pedro Neighborhood Council	2-63
CoSPNC	29 October 2018	Doug Epperhart Coastal San Pedro Neighborhood Council	2-65
NRDC	16 November 2018	Melissa Lin Perrella Natural Resources Defense Council et al.	2-66
NDRC.K1 (Attachment K1)	14 November 2018	Melissa LinPerrella Natural Resources Defense Council et al.	2-98
NRDC DSEIR	29 September 2017	Melissa Lin Perrella Natural Resources Defense Council et al.	2-100
NRDC.I1 (Attachment I1 to 2017 comment letter)	26 September 2017	Melissa Lin Perrella Natural Resources Defense Council et al.	2-106
Individuals			
HAVENICK	30 October 2018	Richard Havenick	2-109
BRIGANTI	14 November 2018	Tony Briganti	2-110

Letter Code	Date	Individual/Organization	Page
Public Hearing Comments			
PH	25 October 2018	Jesse Marquez Coalition for a Safe Environment	2-111

2.3 Responses to Comments

In accordance with CEQA (Guidelines Section 15088), the LAHD has evaluated the comments on environmental issues received from agencies and other interested parties and has prepared written responses to each comment pertinent to the adequacy of the environmental analyses contained in the Recirculated DSEIR. In compliance with CEQA Guidelines Section 15088(b), the written responses address the environmental issues raised. In addition, where appropriate, the basis for incorporating or not incorporating specific suggestions into the Revised Project is provided. In each case, the LAHD expended a good faith effort, supported by reasoned analysis, to respond to comments.

This section includes responses not only to the written comments received during the 45-day public review period of the Recirculated DSEIR, but also verbal comments made at the public hearing for the Recirculated DSEIR. Some comments have prompted revisions to the text of the Recirculated DSEIR, which are referenced and shown in Chapter 3, "Modifications to the Recirculated DSEIR." A copy of each comment letter/comment is provided, and responses to each comment letter immediately follow. All of the comments received and the responses to those comments will be considered by the decision-makers prior to taking any action on the Revised Project.

Several comments on the Recirculated DSEIR claimed that the document should be revised and recirculated for additional public review and comment. The following response discusses the standards generally applicable to this issue under CEQA and applies those standards to the comments requesting recirculation.

A lead agency is required to recirculate a Draft EIR when the agency adds "significant new information" to the EIR after the close of the public comment period but prior to certification of the Final EIR (Public Resources Code Section 21092.1; State CEQA Guidelines Section 15088.5). "New information added to an EIR is not 'significant' unless the EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponents have declined to implement" (State CEQA Guidelines Section 15088.5(a)). "Significant" new information includes information showing that "(1) [a] new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented [;] or (2) [a] substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance" (State CEQA Guidelines Section 15088.5 (a)(1), (a)(2)).

The Resources Agency adopted Section 15088.5 of the State CEQA Guidelines in order to incorporate the California Supreme Court's decision in Laurel Heights Improvement Assn. v. Regents of the Univ. of Cal. (1993) 6 Cal.4th 1112. According to the Supreme

Court, the rules governing recirculation of a Draft EIR are "not intend[ed] to promote endless rounds of revision and recirculation of EIRs" (Laurel Heights II, supra, 6 Cal.4th at p. 1132). Instead, recirculation is "an exception, rather than the general rule" (Mount Shasta Bioregional Ecology Center v. County of Siskiyou (2012) 210 Cal.App.4th 184, 221).

Under these standards, a change to a proposed project, made in response to comments on a Draft EIR, generally does not trigger the obligation to recirculate the Draft EIR. "The CEQA reporting process is not designed to freeze the ultimate proposal in the precise mold of the initial project; indeed, new and unforeseen insights may emerge during investigation, evoking revision of the original proposal" (County of Inyo v. City of Los Angeles (1977) 71 Cal.App.3d 185, 199; see River Valley Preservation Project v. Metropolitan Transit Development Bd. (1995) 37 Cal.App.4th 154, 168, fn. 11).

As these cases recognize, CEQA encourages the lead agency to respond to concerns as they arise, by adjusting a project or developing mitigation measures, as necessary. That a project evolves to address such concerns is evidence of an agency performing meaningful environmental review. A rule requiring recirculation of the Draft EIR any time a project changes would have the perverse unintended effect of calcifying or freezing the original proposal, and of penalizing the lead agency or the project sponsor for revising the project in ways that may be environmentally benign or even beneficial. In light of this policy concern, the courts uniformly hold that the lead agency need not recirculate the Draft EIR merely because the proposed project evolves during the environmental review process (see, e.g., Citizens for a Sustainable Treasure Island v. City and County of San Francisco (2014) 227 Cal.App.4th 1036, 1061-1065 [project modification requiring consultation with Coast Guard regarding building designs did not require recirculation of Draft EIR]; South County Citizens for Smart Growth v. County of Nevada (2013) 221 Cal.App.4th 316, 329-332 [identification of staff-recommended alternative after publication of Final EIR did not trigger obligation to recirculate Draft EIR because alternative resembled other alternatives that the EIR had already analyzed]; Western Placer Citizens for an Agricultural and Rural Environment v. County of Placer (2006) 144 Cal.App.4th 890, 903-906 [revision in phasing plan did not trigger recirculation requirement because revision addressed environmental concerns identified during EIR process]).

Similarly, information that clarifies or expands on information in the Recirculated DSEIR does not require recirculation (see, e.g., North Coast Rivers Alliance v. Marin Municipal Water Dist. Bd. of Directors (2013) 216 Cal.App.4th 614, 654-656 [addition of a hybrid alternative to the Final EIR did not trigger duty to recirculate the Draft EIR]; Clover Valley Foundation v. City of Rocklin (2011) 197 Cal.App.4th 200, 219-224 [information regarding presence of cultural resources on property did not require recirculation because information amplified on information that was already in Draft EIR]; California Oak Foundation v. Regents of Univ. of Cal. (2010) 188 Cal.App.4th 227, 266-268 [letters addressing seismic risks did not trigger duty to recirculate Draft EIR, where letters recommended further analysis but did not contradict conclusions in Draft EIR]; Cadiz Land Co. v. Rail Cycle, L.P. (2000) 83 Cal.App.4th 74, 97 [commenter's disagreement with analysis of groundwater flow in EIR did not require recirculation because substantial evidence supported EIR's analysis; lead agency had discretion regarding which expert to rely upon]; Marin Municipal Water Dist. v. KG Land California Corp (1991) 235 Cal.App.3d 1652, 1666-1668 [clarifying information regarding potential length of moratorium was not "significant new information"]).

The following discussion applies these standards to the comments stating that the LAHD should recirculate the Recirculated DSEIR. In particular, the discussion focuses on whether the information provided in the comment is new, and whether that information discloses:

- A new significant impact that the project or mitigation would cause,
- An impact that would be substantially more severe unless mitigation is adopted that avoids the impact,
- A feasible project alternative is available that would avoid a significant impact, but the applicant will not adopt it, or
- That the Draft EIR is "fundamentally and basically inadequate" such that meaningful public comment was precluded (CEQA Guidelines Section 15088.5(a)).

In the instance of the Recirculated DSEIR, a number of comments were provided on the document. Comments were provided on nearly every impact addressed in the Recirculated DSEIR. The responses to comments are extensive, in large part because the comments were also extensive. The responses to comments provide the following information:

- First and foremost, the responses address the environmental concerns raised by the comments, and describe how they are addressed in the document;
- They provide corrections to the text, where such corrections are warranted;
- They expand on or provide minor clarifications to information already included in the Recirculated DSEIR in those instances where comments question this information; and
- They result in proposals for new mitigation measures that may more effectively reduce already identified significant environmental impacts of the project.

However, none of the conditions warranting recirculation of a Draft EIR, as specified in State CEQA Guidelines Section 15088.5 and described above, has occurred. As a result of responses to comments and the addition of new information, no new significant impacts would result; there is no increase in the severity of a significant impact identified in the Draft EIR, following mitigation; and as to the Recirculated DSEIR adequacy, the LAHD believes the SEIR is complete and fully compliant with CEQA.

2.3.1 Master Responses

Because several of the comment letters received had similar concerns, a set of master responses were developed to address common topics in a comprehensive manner. The following Master Responses section includes feedback on the following topics:

1. Feasible Mitigation – Guidance and Applicability
2. Zero- and Near-Zero-Emissions Technologies
3. Port-wide Emission Reduction Programs
4. Non-Compliance with the Original FEIR MMs
5. Comparative Emissions

Individual responses to all comment letters/comments received on the Recirculated DSEIR are presented following the Master Responses and may refer to the Master Responses in total or in part.

2.3.1.1 Master Response 1: Feasible Mitigation – Guidance and Applicability

Several comments questioned whether all feasible mitigation measures have been identified within the Recirculated DSEIR to reduce impacts to the maximum extent feasible. This response describes the CEQA requirements for consideration of mitigation measures.

Mitigation is required only for significant environmental impacts (PRC 21100(b)(3); State CEQA Guidelines Sections 15126.4(a)(1)(A) and 15064(e)). An EIR should focus on mitigation measures that are feasible, practical, and effective (PRC 21003(c); Napa Citizens for Honest Govt. v. Napa County Bd. of Supervisors (2001) 91 Cal.App.4th 342, 365). An agency may reject mitigation measures or project alternatives if it finds them to be "infeasible" (PRC 21081(a)(3); State CEQA Guidelines Section 15091(a)(3)). "Feasible" is defined as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and technological factors" (PRC 21061.1; State CEQA Guidelines Section 15364). Consideration of feasibility of mitigation measures may also be based on practicality (No Slo Transit, Inc. v. City of Long Beach (1987) 197 Cal.App.3d 241, 257). CEQA "does not demand what is not realistically possible, given the limitation of time, energy and funds" (Concerned Citizens of South Central Los Angeles v. Los Angeles Unified Sch. Dist. (1994) 24 Cal.App.4th 826, 841).

Per these requirements, LAHD has complied with its legal obligation under CEQA to substantially lessen or avoid significant environmental effects to the extent feasible. The mitigation measures presented in the Recirculated DSEIR represent the expert opinions of the preparers of the Recirculated DSEIR regarding how best to effectively, and feasibly, substantially reduce or avoid the Revised Project's significant environmental effects. Further, those mitigation measures have been subjected to public review and scrutiny through the Recirculated DSEIR process.

LAHD recognizes that comments frequently offer thoughtful suggestions regarding how a commenter believes that a particular proposed mitigation measure can be modified, or perhaps changed significantly, in order to more effectively, in the commenter's view, reduce the severity of environmental effects. In addition, while a lead agency is required to respond to comments proposing concrete, obviously feasible mitigation measures, it is not required to accept suggested mitigation measures (A Local and Regional Monitor (ALARM) v. City of Los Angeles (1993) 12 Cal. App. 4th 1773, 1809). In determining whether to accept a commenter's suggested changes, either in whole or in part, LAHD has considered, among others, the following factors: (i) whether the proposed revisions are feasible from an economic, technical, operational, legal, environmental, or other standpoint; (ii) whether the proposed revisions represent a clear improvement, from an environmental standpoint, over the draft language that a commenter seeks to replace; and (iii) whether the proposed revisions are sufficiently clear as to be easily understood by those who will implement them.

LAHD took seriously every suggestion made by commenters and appreciated the effort that went into the formulation of suggestions. LAHD staff and consultants spent significant time carefully considering proposed suggestions for new and revised

mitigation measures and in some instances adopted some or all of what a commenter suggested. LAHD has identified, and proposed to incorporate, all feasible mitigation measures, including feasible revisions to the existing mitigation measures recommended by commenters. No additional mitigation measures have been determined to be feasible to reduce significant impacts disclosed in the Recirculated DSEIR; however, MM AQ-10 (Vessel Speed Reduction Program) has been modified to remove the possibility of a vessel operator submitting an alternative compliance plan for the Port's consideration. The feasibility of other specific suggested measures is discussed in the individual responses below, as appropriate.

2.3.1.2 Master Response 2: Zero- and Near-Zero-Emissions Technologies

A number of commenters stated or implied that the Recirculated DSEIR did not include a meaningful commitment to zero-emissions technologies. This master response addresses those comments by describing the current feasibility status of the technologies being considered by the Port, its tenants, industry, and regulatory agencies for use in marine terminals in San Pedro Bay.

Background

The Port is committed to finding new ways to reduce emissions from ships, trains, trucks, harbor craft and cargo handling equipment. A key tool in the Port's efforts to reduce pollution is the Clean Air Action Plan (CAAP), which outlines the goals, objectives, and initiatives of the Port of Los Angeles and the Port of Long Beach in the field of air pollution reduction. With the ultimate policy goal of eliminating all pollution from port-related operations, the CAAP promotes the testing of emerging technology to bring emission down to zero. The first iteration of the CAAP was approved in 2006; the latest update was adopted by the two ports in 2017. The 2017 CAAP commits the Port to incorporating near-zero and zero-emission technologies into the operations of the Port and its tenants, with the goal of achieving zero-emissions operations by 2035.

While the CAAP has been very successful at encouraging substantial emission reductions, further reductions are needed Port-wide as throughput continues to increase in the coming years. Furthermore, the LAHD has identified zero-emission equipment as a critical element to be integrated into marine-related goods movement in order to meet greenhouse gas (GHG) reduction deadlines (see the 2017 Clean Air Action Plan). The development and deployment of new technology involves the following four steps: (1) research and development; (2) technology development and demonstration; (3) pre-production deployment and assessments; and, (4) early production deployments. As the project summaries below illustrate, none of the zero-emission technologies has progressed significantly beyond step 3.

The Technology Status Report – Zero Emission Drayage Trucks (TIAX, 2011), prepared for the Ports of Los Angeles and Long Beach, examined the state of current zero-emission technologies and outlined a reasonable, programmatic approach to commercialization, based on thorough demonstration and evaluation. The report concluded that a two-phase demonstration approach to commercialization is needed. The first phase would be a small-scale (one to three units) demonstration to test basic technical performance. This would be followed by the second phase consisting of a broader, large-scale (ten to twenty units) demonstration to assess how the technologies fit into existing operations on a multi-unit basis. Since that time, a number of demonstration and pilot projects have taken place at the Ports, as described below.

In July 2011, at a joint meeting with the Harbor Commissions of the Ports of Los Angeles and Long Beach (also called the San Pedro Bay Port Complex), staff of the two Ports presented the Roadmap for Zero Emissions (Port of Long Beach and Port of Los Angeles, 2011). That document expresses the Ports' commitment to zero-emission technologies by establishing a reasonable framework for future identification, development, and testing of non-polluting technologies for moving cargo. The Ports of Los Angeles and Long Beach's joint San Pedro Bay Ports Technology Advancement Program (TAP) funds efforts to evaluate and demonstrate new technologies such as zero-emission trucks and cargo-handling equipment (CHE) that could further reduce emissions from goods movement. The Ports of Los Angeles and Long Beach regularly meet with technology developers to stay informed about new and emerging technologies that may provide options for reducing emissions from Port operations. Recommendations from the TAP are taken to the Boards of Harbor Commissioners when selecting and funding projects. Annual status reports on the TAP's completed and ongoing projects are provided on the TAP website at http://www.cleanairactionplan.org/technology-advancement-program/.

As detailed in Section 1.10.2.1 of the Recirculated DSEIR, in September 2015, the LAHD released a draft Zero Emission White Paper to assist the Port in moving toward the adoption of zero-emission technologies for moving cargo on and off Port terminals to a final destination. The LAHD has provided more than $7 million in funding for projects aimed at developing zero-emission technology for short-haul drayage trucks and CHE; one of the specific priorities of the 2018 TAP is to allocate up to $500,000 from each Port to support the pilot deployment of a fleet of 50 to 100 zero-emissions trucks and to evaluate infrastructure needs for those trucks. Initial testing of zero-emission vehicles showed mixed results, but more recent progress has been made that reinforces the LAHD's belief that zero-emission container movement technologies show great promise for helping to reduce criteria pollutant and GHG emissions.

While zero-emission technologies are promising, they require longer-term evaluations to establish the technical viability, operational reliability, and the ability to attract participation from established original equipment manufacturers that will lower acquisition and maintenance costs and allow this equipment to become commercially viable. Zero-emission technology also presents many operational concerns, such as charging/fueling times, maintenance issues, and lack of support infrastructure, that need to be examined prior to full deployment into the fleet. Additionally, durability, loss of power potential, and safety need to be monitored through testing before stakeholders commit to large capital investments. Existing data in these areas are extremely limited, although several demonstration projects are currently underway.

Further, without the completion of the real-world fleet testing with full loads and full duty cycles, including longer-term mechanical service and reliability over a sufficient demonstration period, a system that later proved to be unreliable would result in disruption and delay of cargo flow and trade at the Port Complex. In recognition of the potential future promise of such technologies, LAHD has included a lease measure (LM) in the Revised Project that requires periodic technology reviews (LM AQ-1). This lease measure will ensure that the tenant reconsiders the feasibility of zero- and near-zero-emission technologies in the future as the technologies continue to develop. In addition, as required by LM AQ-3 and LM AQ-22, the tenant will be required to confer with LAHD any time they are replacing any CHE.

Drayage Trucks

Real-world, in-use data is essential, particularly when deploying new technologies on public roads, as is the case with drayage applications. In addition to the demonstration projects summarized below, information on planned zero-emission truck development can be found at the Port's website: https://www.portoflosangeles.org/environment/air-quality/zero-emissions-technologies.

Technology Development and Demonstration: Over the past 15 years, a number of projects, most co-funded by the Ports of Los Angeles and Long Beach, have involved the development and testing of zero- and near-zero-emissions drayage trucks. Example projects include:

- In 2006, LAHD co-funded with SCAQMD the world's first plug-in, battery-powered, heavy-duty truck prototype.
- Zero Emission Cargo Transport Project (ZECT I). SCAQMD's project began in 2012 and developed and tested a variety of battery-electric and plug-in hybrid-electric configurations (SCAQMD, 2016a). A few battery-electric units were deployed by Port drayage truck operators in near-port service (because of their limited range and long charging times) and others were subjected to dynamometer testing and limited on-road testing. In 2012, Balqon units completed a preliminary demonstration which included several round-trips from a near-dock railyard to Port terminals. SCAQMD concluded, however, that the major constraints to the deployment of battery-electric trucks were their short range and long charging times, the lack of supporting infrastructure and charging standards, high capital costs, and the fact that the technology is still unproven (SCAQMD, 2016b). The plug-in hybrid units had auxiliary power units fueled variously by CNG, LNG, and diesel, and most of their participation in the ZECT I project involved development and laboratory testing of the units.
- Zero Emission Cargo Transport Project (ZECT II). In the follow-up ZECT II project, six fuel-cell/battery-electric hybrids and one natural gas/battery-electric hybrid were developed and assembled to be tested for drayage service (CAAP, 2017). As of late 2018, none of the units had entered revenue service in their planned demonstration tests pending completion of development and resolution of a number of design and fabrication issues. One model entered an in-service demonstration deployment in 2018 that revealed a number of operational and technical flaws (Port of Los Angeles and Port of Long Beach, 2019).
- Zero-Emission Drayage Truck Demonstration Project. SCAQMD is supporting the deployment of 43 zero- and near-zero-emission trucks, mostly battery-electric models. The trucks will be built by Daimler (20 units) and Volvo (23 units) and will be deployed in demonstration service between the ports and various inland warehouse destinations. The $120 million program includes the installation of charging systems (partially solar powered) and other features.
- Technology Advancement Program (TAP) Two TAP programs began evaluating the operation of a near-zero emission (NZE) natural gas engine in drayage service and aftertreatment emission reduction technologies in heavy-duty engines. In a six-month demonstration deployment, the NZE drayage truck accomplished over 500 revenue trips, traveled over 18,000 miles, and experienced no unusual service or maintenance issues. The aftertreatment

project was still underway as of late 2018 (Port of Los Angeles and Port of Long Beach, 2019).

- Large-Scale Zero Emission Truck Deployment Pilot Project. The Ports are preparing a scope of work for demonstrating a large-scale (50-100 units) deployment of zero-emission drayage trucks in field operation and are currently assembling trucking and truck manufacturing company partners (CAAP, 2019).
- Zero Emission Near-Zero Emission Freight Facilities. In September 2018 the Ports received substantial grants from CARB that will support the deployment of 10 Kenworth/Toyota hydrogen-fuel-cell-powered trucks in the Port of Los Angeles's "Shore to Store" program and 15 Peterbilt/Transpower battery-electric-powered drayage trucks in the Port of Long Beach's START program. The POLA program was approved by the Board in March, 2019, and contracting details are being worked out.
- SCAQMD's eHighway. SCAQMD's project tested the concept of heavy-duty trucks utilizing an overhead electric catenary system on designated highways (Siemens, 2018). The study constructed a catenary system on one mile of Alameda Street and outfitted three Class 8 trucks with pantographs and electric traction motors. After six months of testing in 2017, the study concluded that the concept was viable, but identified a number of hurdles that would need to be overcome for commercial application to be contemplated, including high infrastructure costs, conflicts with utilities and traffic, design flaws, and reliability issues.
- Early Adopter Truck Incentive Program. The Ports have committed to supporting a near-zero natural gas drayage trucks deployment project through a CEC grant secured by SCAQMD that is expected to fund up to 140 low-NO_x trucks. SCAQMD is contracting with trucking companies to deploy the trucks by the end of 2019.

Current Status of Zero- and Near-Zero-Emission Drayage Truck Technology: These projects and others were considered in a recent evaluation, required by the 2017 CAAP, of the feasibility of zero- and near-zero-emissions technology for drayage applications (Tetra Tech/GNA, 2019a). That study evaluated "the ability of alternative fuel/technology drayage trucks to provide similar or better overall performance and achievement compared to today's baseline diesel drayage trucks, when broadly used for all types of drayage service". Evaluation parameters included: commercial availability, technical viability, operational feasibility, availability of fuel and infrastructure, and economic workability. The first two parameters were applied in an initial screening, and technologies that passed that screening were further assessed according to the remaining three parameters.

The study concluded that as of late 2018, one zero-emission Class 8 truck model and several near-zero-emission models are commercially available from original equipment manufacturers (OEMs). For the zero-emission truck, BYD offers a battery-electric model in what the report called an "early commercial launch". Six OEMs offer natural-gas-fueled near-zero-emissions models, all powered by the same Cummins Westport engine. The natural-gas-fueled technologies already appear to have exhibited adequate technical viability, and the report's authors expect the battery-electric technology to achieve that status within a few years, possibly as early as 2021. The other three technologies – zero-emission fuel cell, near-zero-emission hybrid-electric, and near-zero-emission diesel –

were not deemed commercially available and did not appear to be likely to be available by 2021; furthermore, none has adequately demonstrated technical viability. Accordingly, those technologies cannot at this time be considered feasible for drayage applications and were not considered further in the study.

In terms of operational feasibility, infrastructure availability, and economic workability, the study found that the battery-electric technology is promising but still faces challenges and constraints. Although battery-electric trucks actually outperform diesel trucks in terms of power, torque, and grade-climbing ability, they have limited range, they are heavier than conventional trucks, and they take a long time to charge. Their short range put limits on the assignments they can handle, the heavier curb weight reduces the weight of the container they can haul, and the long recharging times reduce the time they are in revenue service each day. Furthermore, there is only one OEM currently supporting these trucks and there is very limited charging infrastructure in place, so that large-scale deployment will need to await the development of additional service facilities or the entry of additional OEMs, as well as the development of widespread charging infrastructure. Accordingly, the study concluded that at this time battery-electric trucks are only suitable for limited niche operations within the drayage industry. Finally, the study projected that the life-time cost of battery-electric trucks would, without substantial financial incentives, be approximately 30% more than the cost of diesel or natural-gas-fueled trucks. Currently available incentives reduce the cost to well below the cost of a diesel unit, meaning that as long as incentives last, battery-electric trucks could have a substantial financial advantage; the study points out, however, that the incentives are not guaranteed over the 12-year life of a truck, and that existing incentive funding would only cover approximately 1,700 trucks, whereas the port drayage fleet has approximately 16,000 trucks.

Summary: The current generation of natural-gas-powered near-zero-emission trucks closely resemble their diesel counterparts in most evaluation areas and do not appear to pose serious operational feasibility challenges to widespread deployment. Earlier problems with lack of power appear to have been resolved with larger, better-designed engines. The major challenge that was identified was the need for natural gas fueling infrastructure to expand regionally fast enough to support large-scale deployment. The Clean Trucks Program strategy outlined in the 2017 CAAP recognizes that near-zero-emission technology for drayage trucks has matured to the point of commercial feasibility. Accordingly, starting in 2020 only near-zero-emission trucks will receive a fee exemption for entering Port terminals, and starting in 2023 all new entries to the Port Drayage Truck Registry must meet or exceed the near-zero-emission standard. The effect of this policy, at the CS Terminal as at every marine terminal in the port complex, will be to increase the proportion of near-zero- and zero-emission trucks that pass through the terminals' gates over time. This will occur because trucking firms will be incentivized to replace older trucks with trucks meeting the latest standards in order to ensure access to the terminals under competitive financial terms.

The technology of heavy-duty, electric-drive engines with the potential for zero emissions has advanced greatly in recent years. LAHD has been a leader in developing and testing zero-emission, heavy-duty trucks that could be used in drayage service, and has sent a clear message to technology providers that zero-emission technologies are needed as soon as practicable. However, as recently as 2015 zero-emission drayage truck technology was characterized by CARB only as "promising" (CARB, 2015), and the 2017 CAAP stated that most near-zero and zero-emission technologies may take several years to

become commercialized and feasible for drayage. Although the 2019 Feasibility Study (Tetra Tech/GNA, 2019a) documented significant progress, it concluded that considerably more progress needs to be made in order to bring zero-emission technology into widespread use in the drayage industry. The 2017 CAAP recognizes that it is too early to mandate specific requirements for zero-emission technology in the drayage fleet, but it is appropriate to modify the truck rate such that by 2035 only zero-emission trucks will receive fee exemptions.

Cargo-Handling Equipment (CHE)

Cargo-handling equipment is the general term for the equipment use to move containers and other types of cargo around in marine terminals. CHE, which has traditionally been powered by diesel engines, is considered as off-road equipment because it is not certified for use on public highways. LAHD is focused on the development of zero and near-zero-emission technologies for CHE and is in the process of developing and testing various CHE technologies at several Port terminals. These efforts are being undertaken in concert with the Port of Long Beach and with a number of government agencies (e.g., CARB and the SCAQMD), marine terminal operators, and original equipment manufacturers (OEM). The Port's recent feasibility review, required by the 2017 CAAP, evaluated the zero- and near-zero-emission CHE technologies currently being developed for port use with respect to their commercial and technical viability, operational feasibility, availability of supporting infrastructure, and economic workability (Tetra Tech/GNA, 2019b).

Yard Tractors: Yard tractors, also known as hostlers, are used in container terminals to move chassis loaded with containers around the terminal. Typical movements are between the container storage areas (stacks or wheeled) and the wharf cranes, between container storage areas and the on-dock railyard, and between storage areas. As of late 2018, approximately 1,700 yard tractors were in service in the San Pedro Bay ports' marine terminals (Tetra Tech/GNA, 2019b). Yard tractors have traditionally been powered by heavy-duty diesel engines (typically in the range of 200–300 horsepower) and are generally rated for off-road use. Recently, however, increasing numbers of yard tractors have been ordered with natural-gas-fueled (generally, propane) engines, although these units are not considered near-zero emission CHE because of their NO_X emissions. Currently there are approximately 300 yard tractors fueled by natural gas (propane) or, in a few cases, gasoline, but in general these are powered by older engine models that have been discontinued (Tetra Tech/GNA, 2019b).

Technology Development and Demonstration: LAHD has participated in funding numerous zero-emission and near-zero-emission yard tractor projects through the TAP, including plug-in battery-electric yard tractors and a hydrogen fuel cell yard tractor. Tetra Tech/GNA (2019b) list a total of 16 key yard tractor demonstration projects in the San Pedro Bay ports, although only two have been completed. Example demonstration projects include:

- In 2013, CARB selected the Ports of Los Angeles and Long Beach to be recipients of grant funding for a two-year project to develop and demonstrate two electric yard tractors developed by TransPower. Similar tractors were demonstrated under a California Energy Commission (CEC) grant at the Port of San Diego.
- Balqon E-30 Electric Terminal Tractor Development and Demonstration Project. The Port has been proactive in working with manufacturers (such as Balqon and

TransPower) to design and produce prototype plug-in electric yard tractors, which operate on lithium-ion batteries. In this project, which took place between 2008 and 2012, the Port purchased 14 battery-electric units and a charging system for in-use test deployment. Initial testing of the third generation of Balqon yard tractors at the California Cartage Intermodal Facility in 2011 indicated that the units were capable of operating for approximately 12 hours on a single charge. Balqon, however, is no longer producing CHE, having gone out of business.

- Hybrid Yard Hostler Demonstration and Commercialization Project. This 2010 TAP project involved three hybrid (diesel-battery-electric) yard tractors. The three units were put into service at the Port of Long Beach for a period of 6 months performing ship, rail, and dock work, with a goal of measuring the emissions of a conventional and hybrid yard tractor following cycles developed from monitoring in-use activities. Results indicated that at low loads, the hybrid consumed about 7 percent more fuel and at high loads about 3 percent less fuel than the conventional diesel tractor, while nitrogen oxide (NOx) emissions were reduced at both load levels. Because the results did not indicate fuel savings for the hybrid yard hostler, further refinement of the hybrid drive system design was recommended to improve fuel economy.
- Liquefied Natural Gas (LNG) Yard Hostler Demonstration and Commercialization Project. This project assessed the performance and emissions of three LNG yard tractors over 8 months from June 2006 to January 2007 at the Port of Long Beach. Results indicated that LNG yard tractors used about 30 percent more diesel gallon equivalents than diesel yard hostlers, had higher NOx emissions, and had an incremental cost over a diesel yard tractor of approximately $40,000.
- Advanced Yard Tractor Deployment and Eco-Fratis Drayage Truck Efficiency Project. In 2017 ETS (through LAHD) was awarded a grant from the CEC to evaluate five zero-emission battery-electric yard tractors, and 20 near-zero-yard tractors equipped with the CARB-certified Cummins Westport Low NOx engines (0.02 grams/brake horsepower-hour). The tractors will be deployed at the Everport Container Terminal and the Port has constructed electric charging stations at the terminal to support the battery-electric units. To further reduce GHG, the 20 near-zero-emission yard tractors will be fueled with renewable LNG provided by Clean Energy via a mobile LNG fueling system. This demonstration project is still underway.
- Everport Advanced Cargo Handling Equipment Demonstration Project. The LAHD was awarded a CEC grant in early 2017 to deploy three additional zero-emission battery-electric yard tractors (as well as two zero-emission battery electric top handlers). This project is expected to begin in Summer 2019 and last for 12 months.
- WBCT Yard Tractor Project. This project, funded by the Port of Los Angeles, SCAQMD, and the CEC, will deploy a wireless charging system and 10 zero-emission yard tractors at the China Shipping Terminal. The project is expected to go to the Board for approval in mid 2019.
- Port Advanced Vehicle Electrification project. A CEC program at the Port of Long Beach's Pier T terminal includes installation of electrical infrastructure to

support the future deployment of battery-electric yard tractors and forklifts. The main goal of the CEC grant projects is to determine the long-term feasibility of zero- and near-zero-emission yard tractors.

- Zero-Emissions Terminal Equipment Transition Project. The Port of Long Beach and Southern California Edison have initiated a project to evaluate a range of advanced-technology CHE. The yard tractor component of the project is deploying 12 electric-powered yard tractors at two POLB terminals, supported by an automated smart charging system, in a demonstration project. The project kicked off in late 2017 and in-use evaluations will likely take place in 2019, as 2018 was spent finalizing agreements and designing, ordering, and installing project components. This project, too, is intended to evaluate the operational feasibility of battery-electric yard tractors in real-world duty cycles.
- START Program. The Port of Long Beach and CARB have initiated testing of 33 zero-emissions yard tractors at the Pier C terminal, one of the nation's largest deployments at a single terminal. This project has included the installation of charging infrastructure at the terminal.

These examples illustrate the magnitude of the efforts that the developers, users, and supporters of zero- and near-zero-emission yard tractors are making to bring the technology to the market. Each project reveals issues and challenges that need to be addressed before mitigation requiring use of zero-emissions technology can be deemed feasible as a mitigation measure.

Current Status of Yard Tractor Technology: The Ports' review concluded that zero-emission fuel cell, near-zero-emission hybrid, and near-zero-emission diesel technologies for yard tractors have not progressed enough to be considered commercially available (Tetra Tech/GNA, 2019b). Those technologies are in the late technology development or early demonstration phases and are not expected to be ready for operational deployment by 2021. Accordingly, the review did not consider those technologies any further, and the LAHD considers that they are too far from being feasible to be considered for the Revised Project.

The report determined that both zero-emission battery-electric and near-zero-emission natural gas (CNG) technology for yard tractors are commercially and technically viable. Multiple OEMs are offering both technologies in "early commercial" product launches (there are still unresolved issues associated with production capability and end-user interest), and both technologies have undergone enough testing and demonstration of full-scale prototypes to verify their ability to meet basic performance criteria.

However, the report's authors caution that both technologies "need significantly more operational time in real-world CHE service at ports" before they can be considered to have been proven to work in their final forms and under expected conditions, i.e., to be operationally feasible. A number of factors influence operational feasibility, including endurance requirements, space constraints for operation and fueling, speed and power requirements, and infrastructure needs. The report compared three battery-electric models and one LNG model to the standard diesel yard tractor. It found that the LNG yard tractor (Capacity's TJ9000 model) appears to be fully comparable to the diesel standard in terms of endurance and fuel capacity, meaning that it is operationally feasible. The battery-electric models could handle a standard 20-hour, two-shift operation if they could be charged for 45 minutes between shifts, but only two (BYD's 8Y and Kalmar's T2E) were able to handle two shifts without inter-shift charging, and then only

marginally; the Orange EV tractor could not get through two shifts without a charge. None of the battery-electric models could handle a three-shift operation, and only BYD's 8Y model could handle an extended two-shift operation. The report also pointed out that the heavy use required of yard tractors in marine terminals would rapidly degrade their batteries, thereby shortening their endurance and overall service lives, and suggested that the ongoing demonstration projects may provide more information on that issue. In addition, it is not yet clear that inter-shift charging can actually provide adequate power, given the current charging system capabilities. Finally, the report concludes that the BYD and Kalmar battery-electric models and the Capacity LNG model have adequate dealer resources to support their specialized maintenance and parts requirements.

With respect to economic workability, both yard tractor technologies are substantially more expensive to purchase (assuming no incentives) than the diesel standard: half again as much for the LNG tractor and three times as much for the battery-electric models. Relative fuel and maintenance costs are unknown at this time because neither technology has accumulated enough operational hours for a meaningful determination. The total cost of ownership of the two technologies, with incentives, is estimated to be comparable to the cost of the standard diesel tractor and could even, depending on electric rates, be somewhat lower in the case of battery-electric units. However, the availability and duration of incentives is very uncertain, and without the very substantial incentives currently in place battery-electric units could cost almost 50% more than diesel technology units over a seven-year service life.

Overall, the report concluded that "natural gas yard tractors are currently the only ZE or NZE fuel-technology platform likely to achieve [marine terminal operator] endurance requirements," although that needs to be proven in the ongoing revenue service demonstrations (i.e., the CEC/Everport project summarized above). The battery-electric models cannot reliably complete two shifts between charging events and may not be able to perform adequately even with an inter-shift charge. Furthermore, the service network for battery-electric technology needs to expand in order to ensure reliable support. The report also considers the substantial charging infrastructure that needs to be installed at a marine terminal to support a large-scale battery-electric deployment, a factor that would involve considerable capital costs (at least $150,000 per charging spot) and could require more space than is currently devoted to yard tractor storage and fueling. The report also points out that the optimal type and configuration of charging infrastructure has still not been determined; in addition, in 2016 the LAHD estimated that installing electric infrastructure for yard tractors at the CS Terminal would cost approximately $55 million. Finally, the report calculates that conversion to battery-electric yard tractors could triple a terminal's power demand, which would require that SCE and LADWP undertake substantial upgrades to their distribution systems.

The report's authors point out that the limited scale and duration of demonstrations thus far means that marine terminal operators do not have much operational experience with the newest zero- and near-zero-emissions CHE platforms and are not likely to be comfortable with a large-scale conversion of their fleets. However, they suggest that because a number of larger-scale demonstration projects are getting underway, the terminal operators are likely to feel more comfortable with those technologies within a few years and be ready to adopt them. Accordingly, both technologies may be ready for operational deployment by approximately 2021, but only if major OEM and government support continues and marine terminal operators do, in fact, gain sufficient experience with and confidence in those technologies to contemplate fleet conversions.

Gantry Cranes: Container terminals use mobile gantry cranes for managing stacks of intermodal containers within the terminal. There are four basic types of such cranes in use in marine terminals: diesel-powered rubber-tired gantry cranes (RTGs), electric-powered RTGs (ERTGs), hybrid diesel-electric RTGs, and rail-mounted gantry cranes (RMGs), which are electric-powered. A fifth type, hydrogen fuel-cell RTGs, is not being manufactured or sold at this time, according to Tetra Tech/GNA (2019b), and is not expected to be commercially or technically viable in the foreseeable future.

Diesel-powered RTGs are the standard technology in container terminals, comprising all but 14 of the 169 RTGs in use in the San Pedro Bay marine terminals (Tetra Tech/GNA 2019b). They can move readily between stacks of containers, have substantial lifting capacity, and are adaptable to a variety of container yard configurations. The diesel engines actually drive generators that power the electric hoist motors, much like the arrangement in railroad locomotives.

All-Electric RTGs: ERTGs run on electric power from either a grid connection via a bus bar, overhead conductor, or cable reel, or from a rechargeable battery pack; as of late 2018 the grid-connected configuration was the more mature technology (Tetra Tech/GNA, 2019b). Most grid-connected models include a small diesel engine for moving between rows of stacked containers (some prototype models include a battery system to power such moves). Some manufacturers offer kits to convert RTGs to ERTGs or hybrid RTGs (see below). ERTGs are a fully mature technology, commonly used in Europe, Asia, and Mexico, and offered by several OEMs (Tetra Tech/GNA, 2019b).

ERTG systems require fixed electrical infrastructure, which adds a considerable capital cost to their deployment (in 2016 LAHD estimated the cost of electric infrastructure for 12 ERTGs at the CS Terminal to be $13 million), and they make the layout and operation of the container stacking area highly inflexible. These features can make them difficult to implement on existing container terminals, since the installation of ERTGs can require extensive terminal modifications. Accordingly, ERTG systems are best suited for master-planned terminals where the physical layout and operations are specifically designed to accommodate the ERTG system, although, as the example below shows, converting an existing terminal from RTGs to ERTGs is possible given a favorable existing configuration. Tetra Tech/GNA (2019b) estimate that the high purchase price and infrastructure costs of ERTGs more than offset lower power and maintenance costs, making the total cost to own and operate ERTGs approximately 10 to 20 percent higher than those of a conventional diesel RTG.

One demonstration project for ERTGs is underway in the San Pedro Bay ports: the Zero-Emissions Terminal Equipment Transition Project at the Port of Long Beach is converting nine RTGs at the SSA Terminal on Pier J to full electric power (Port of Los Angeles and Port of Long Beach, 2018). The project kicked off in late 2017 and includes installing the electrical infrastructure needed to provide power to the cranes. In-use evaluations will likely take place in 2019, as 2018 was spent designing, ordering, and installing project components.

The Port's recent third-party technology review (Tetra Tech/GNA 2019b) concluded that ERTGs are commercially available and have few operational feasibility issues. Remaining issues regarding the availability of infrastructure and economic workability in the San Pedro Bay marine terminals are expected to be resolved by ongoing and planned demonstration projects, but overall the technology is considered feasible for appropriately configured terminals. The Revised Project includes the conversion of four RTGs to

ERTGs (MM AQ-17) because one area of the CS Terminal is suitable for the deployment of ERTGs.

Rail-Mounted Gantry Cranes (RMG): RMGs, which are powered entirely by electricity provided by a fixed infrastructure, sacrifice the mobility of their diesel counterparts and even of ERTGs because each RMG is restricted to its set of rails; however, RMGs have lower long-term operating costs, and because they run entirely on electricity, they provide substantial environmental benefits. RMG systems involve similar financial and operational considerations to those discussed above for ERTGs. Additionally, the capital investment and scale of construction required to develop an RMG system are greater than for an ERTG system, given the need to install rails along the container stacks. As with ERTG systems, RMG systems are best suited for master-planned terminals where the physical layout and operations are specifically designed to accommodate the RMG system.

Hybrid RTGs: According to the Port's recent technology review (Tetra Tech/GNA 2019b), at least three manufacturers offer RTG systems that use a diesel-electric hybrid advanced energy capture and battery storage system. The technology is considered fully mature, being widely deployed, including at several San Pedro Bay terminals. Hybrid RTGs have substantial fuel savings compared to diesel RTGs (a second-generation EcoCrane™ at the Port of Los Angeles' West Basin Container Terminal demonstrated a 56 percent fuel economy improvement), and those savings more than offset the higher purchase price, especially since there are no associated infrastructure costs. Because hybrids run on diesel fuel, they are supported by the existing infrastructure in the terminal, and converting an existing RTG unit from diesel to hybrid technology is relatively straightforward, although at over $600,000 per unit it is costly (a recent LAHD grant application to US EPA's Clean Diesel Funding Assistance Program budgeted $630,000 to convert one diesel RTG to hybrid technology). Accordingly, terminals can convert their operations to hybrid technology without the disruption and costs of an infrastructure construction project. Given these factors, the LAHD considers hybrid RTGs to be a feasible technology and, in fact, MM AQ-17 of the Revised Project requires that existing diesel-powered RTGs at the CS Terminal be converted to hybrid units (except the four that are to be converted to ERTGs).

Top Handlers/Top Picks: Container terminals use various types of mobile cranes to lift containers on and off of stacks, trucks chassis, and rail cars. Cranes of the top handler/top pick configuration (i.e., grasping the container by its top corners) are by far the most common type in use in the San Pedro Bay marine terminals, which use a total of approximately 400 units (Tetra Tech/GNA, 2019b). Reach stackers, which grasp the container only by its two near corners, are rarely used because they take up too much space for maneuvering and they cannot reach the top of the container stacks. Top handlers are typically powered by a diesel engine of 250-350 horsepower.

Several projects at the two ports are or will be testing prototype battery-electric top handlers, including one with a hydrogen fuel cell range extender. The projects include the Everport Advanced Cargo-Handling Equipment Demonstration Project at the Port of Los Angeles and the C-PORT, START, and PAVE projects at the Port of Long Beach. Results of these demonstrations will indicate whether the current top handler zero-emissions technology is capable of performing at the activity levels needed in modern container terminals. As in the case of yard tractors, battery-electric top handlers require substantial electrical charging infrastructure, which must be installed at each terminal (in

2016 the LAHD estimated that electrical infrastructure for top handlers at the CS Terminal would cost approximately $20 million to install).

The Port's recent technology review (Tetra Tech/GNA, 2019b) found that zero- and near-zero-emissions top handlers are not yet in commercial production and that the technologies did not achieve the basic considerations of commercial and technical viability needed for further consideration. Given their lack of demonstrated ability to perform as required in marine terminals, the LAHD concludes that zero- and near-zero-emissions top handlers are not yet feasible technologies.

Forklifts: Container terminals use forklifts to move empty containers, chassis, and other cargo-related items. About a third of the 750 forklifts used in San Pedro Bay terminals are large-capacity units powered by diesel; most of the rest are powered by natural gas or electricity (Tetra Tech/GNA, 2019b). WBCT operates several 5-ton and 18-ton forklifts at the CS Terminal, some fueled with diesel, most with LPG. Unlike yard tractors, top handlers, and RTGs, forklifts are typically used only a few hours a day, and thus have a much lighter duty cycle than other CHE.

Numerous low-capacity and medium-capacity zero- and near-zero-emissions forklifts are commercially available, and a recent review commissioned by the Port (GNA, 2019) concluded that zero-emission technology for small forklifts is fully mature. Small battery-electric forklifts can be successfully employed in marine terminals because charging does not require extensive, specialized infrastructure and charging times do not conflict with duty-cycle requirements. Accordingly, the Revised Project includes a provision that all 5-ton forklifts at the CS Terminal older than the 2011 model year (which is all but one of the units currently in service) must be replaced by zero-emission units.

The CS Terminal also employs several larger (18-ton-capacity) forklifts. The Port's CHE technology review did not identify any commercially available zero- or near-zero-emissions units with that capacity (Tetra Tech/GNA, 2019b). A demonstration project for a zero-emission high-tonnage forklift will take place at the Port of Los Angeles's Pasha Terminal in 2019, but at this time the LAHD concludes that there is no feasible zero- or near-zero-emissions technology for 18-ton forklifts.

Technologies Suggested by Comments

Two commenters, Citizens for a Safe Environment (CFASE) and the Natural Resources Defense Council (NRDC), suggested other zero- and near-zero-emission technologies for consideration as mitigation for impacts of the Revised Project.

CFASE included with its comment letter an attachment that it represented as a survey of commercially available zero- or near-zero-emissions equipment. It lists over 400 models of equipment in various categories related to transportation, construction, and goods movement. Comment CFASE-4 referred to that equipment as "available, feasible technology mitigation which can be incorporated into the SEIR." Responses to Comments CFASE-10 and CFASE-12 describe the results of a third-party review of CFASE's list (GNA, 2019), which determined that the majority of the listed models are either irrelevant or unsuited to container terminal operations (e.g., light-duty trucks and vans, construction equipment, passenger trains, school buses, taxis, and fire and refuse trucks). The results of GNA's analysis of the remaining equipment are presented in those responses to comments.

CFASE also, in Comment CFASE-20, mentioned zero-emissions goods movement systems based on magnetic levitation and similar technologies. Those systems would move containers between the marine terminals and local destinations such as near-dock railyards, major warehouse concentrations, and/or an inland port. Response to Comment CFASE-20 and Master Response 3 describe in detail the reasons why such a system is both technologically infeasible at this time and not appropriate mitigation for an individual terminal project.

NRDC, in comment NRDC-27, suggested that the CS Terminal should be converted to a fully electrified model, such as the Port of Los Angeles' TraPac Terminal and the Port of Long Beach's Middle Harbor Terminal. Response to Comment NRDC-27 describes how such a concept would be infeasible as mitigation for the Revised Project's impacts because of the scale of the terminal redevelopment project it would require (LAHD estimates the construction cost of such a redevelopment at $396 million, which does not include the terminal operator's costs associated with partial shutdown of the terminal during the three-to-five-year construction project or the capital costs of the new cargo handling equipment).

Conclusion

The LAHD, working collaboratively with Port tenants and other stakeholders, is committed to expanded development and testing of zero-emission technologies, identification of new strategic funding opportunities to support these expanded activities, and planning for long-term infrastructure development to sustain ongoing programs, all while ensuring competitiveness among the maritime goods movement businesses.

As noted above, zero-emission CHE (including drayage trucks, yard tractors, and gantry cranes) requires further evaluation to establish the technical viability, operational reliability, and ability to attract participation from established original equipment manufacturers that will lower acquisition and maintenance costs and allow this equipment to become commercially viable. The Revised Project's lease measures LM AQ-1 and LM AQ-3 were specifically established to integrate these systems into terminal operations when commercial viability is achieved and operational feasibility is ensured. At this time, however, LAHD cannot either mandate zero-emission technologies as mitigation measures for the Revised Project or take credit for implementing such measures.

2.3.1.3 Master Response 3: Port-wide Emission Reduction Programs

Several comments suggested mitigation measures that are impractical to apply on a terminal-by-terminal basis, but instead are only feasibly addressed on a port-wide basis. Others requested that the LAHD implement additional mitigation beyond what current regulations and the San Pedro Bay Ports Clean Air Action Plan (CAAP) would accomplish. This Master Response addresses those comments.

A mitigation measure must have an essential connection with the significant impact of the project, and the measure must be roughly proportional to the project impact to be mitigated (State CEQA Guidelines Section 15126.4(a)(4)(A)-(B)). When addressing a wide-spread regional impact such as transportation, climate change or air quality, lead agencies cannot require project applicants to shoulder more than their fair share of the costs of mitigation. CEQA further does not require that a project be modified or mitigated to improve upon existing environmental conditions. (See In re Bay-Delta Programmatic Envtl. Impact Report Coordinated Proceedings (2008) 43 Cal.4th 1143,

1168 ["[E]xisting environmental problems . . . that would continue to exist even if there were no [project] . . . are part of the baseline conditions rather than [project]-generated environmental impacts . . .."].)

Operation of a container terminal includes a number of activities conducted by third parties – i.e., entities that are not under the control of the terminal operator or the terminal lessee – and that are provided on a port-wide basis to many terminals. Key examples are tugboat escort and bunkering for the container vessels, drayage trucking for delivery of containers, and locomotive activities associated with on-dock intermodal facilities. Suggested mitigation measures that are infeasible to apply on a terminal-by-terminal basis relate to those third-party activities and include:

- requiring the use of cleaner harbor craft,
- requiring zero-emission drayage trucks,
- requiring zero-emission rail locomotives,
- installing zero-emission container movement systems (ZECMS), and
- requiring that only the cleanest containerships service the CS Terminal.

Harbor craft: In the case of tugboats (included in the source category "harbor craft"), the escort and bunkering services they provide are contracted for by the vessel operators (not the terminal operators) and provided by independent tugboat and bunkering companies, who make the decisions on which tugboats will provide which services. Mitigation requiring only a certain type of harbor craft to service a container terminal is infeasible because the terminal has no legal or contractual mechanism for excluding non-compliant harbor craft; in fact, tugboats often do not enter the terminal's leasehold area, but instead operate on Port-owned waters. There are currently two diesel-electric hybrid tugboats in operation in the port complex, the Port of Long Beach has embarked upon a test of an electric-drive tugboat under its CARB-funded START Project, and both ports are partnering with Nett Technologies and Pacific Tugboat Services to develop and test an aftertreatment system for harbor craft (Port of Los Angeles and Port of Long Beach, 2019).

Drayage Trucks: Drayage trucking is described in detail in the report "Assessment of the Feasibility of Requiring Alternative-Technology Drayage Trucks at Individual Container Terminals" (referenced as LAHD [2017] in the Recirculated DSEIR and hereinafter "Drayage Truck Study"), but a brief summary is provided here. The major participants in the drayage industry are drayage companies, beneficial cargo owners, various logistics providers, and ocean carriers. Marine terminals, the Port's leaseholders, are not participants in the drayage industry, as they neither operate drayage trucks nor arrange for drayage services. Drayage companies operate the tractor trucks that haul containers and chassis to and from marine terminals, warehouses, transloaders, railyards, and storage depots. Cargo owners, ocean carriers, and their logistics providers arrange with drayage companies for the drayage of the cargo that they own or for which they have taken responsibility. None of those entities is a tenant of the Port of Los Angeles. Mitigation aimed at restricting drayage at a particular terminal to a particular type of truck would require a container terminal to turn away all trucks except those in the specified category.

Through the Clean Truck Program (CTP), the Ports are committed to converting the ports-wide drayage fleet to near-zero-emissions status and ultimately to zero-emissions status. The proposed CTP update contains the following provisions to that effect:

- Beginning October 1, 2018, new trucks entering the Ports' Drayage Truck Registry (PDTR) must have a 2014 engine model year (MY) or newer. Existing trucks already registered in the PDTR can continue to operate.
- Beginning in early 2020, following promulgation of the state's near-zero-emission heavy-duty engine standard, all heavy-duty trucks will be charged a rate to enter the ports' terminals, with exemptions for trucks that are certified to meet this near-zero standard or better.
- Starting in 2023, or when the state's near-zero-emission heavy-duty engine standard is required for new truck engine manufacturers, new trucks entering the PDTR must have engines that meet this near-zero emissions standard or better. Existing trucks already registered in the PDTR can continue to operate.
- Modify the truck rate so that by 2035 only trucks that are certified to meet zero emissions will be exempt from the rate.

This update will establish the Ports' approach to accelerating the transition to near-zero-emission trucks in the early years, and zero-emission trucks in the later years, and will provide a long-term schedule for the drayage industry to budget and plan for the eventual transition to zero emissions. Please see the 2017 CAAP for more detail.

Locomotives: With respect to locomotives, none of the Port's tenants, including the CS Terminal, has any authority over either Pacific Harbor Line (PHL, the short-line providing switching and dispatching services within the port complex) locomotives or the Class 1 railroads (BNSF and UP, which haul most of the rail cars in and out of the Port), and cannot dictate their operating practices or equipment. The Port has a certain amount of control over locomotives operated by PHL because PHL is under contract to the two ports. That authority is pre-empted to some extent, however, by federal regulatory authority. The Port has no control over the Class 1s because interstate commerce provisions and the Alameda Corridor Use and Operating Agreement pre-empt the Port's authority; emissions reductions involving Class 1 locomotives are the result of federal regulations, supplemented by agreements between the railroads and the State of California. In these circumstances, it is not legally or practically feasible to mitigate project-specific impacts via measures that address locomotive types or movements.

However, the Ports have worked with PHL to reduce emissions from PHL's switching operations on a port-wide basis. As described in the 2017 CAAP, PHL is the cleanest rail company in the country and has started to introduce locomotives with the lowest-emitting Tier 4 engines. The Ports, in partnership with CARB, are funding the development and demonstration of a zero-emission (battery-electric) locomotive manufactured by VeRail for use in switching operations within the Port complex (Port of Los Angeles and Port of Long Beach, 2019). That project has been approved by CARB and the LAHD, system re-design (from the initial CNG concept) has begun, and testing is expected to take place in late 2019. Future efforts by the Ports, PHL, industry, and the regulatory agencies will continue the trend towards near-zero and zero emissions from PHL operations.

ZECMS: Another general concept that has been suggested as mitigation is the zero-emission container movement system (ZECMS), in which electrified monorail-type systems or systems based on existing railroad tracks, would move containers between the marine terminals and inland destinations. Depending on the proponent, destinations could include the near-dock intermodal railyards in Carson (the ICTF and, if it is constructed, the SCIG), the downtown railyards, or even major distribution warehouses throughput the region. A number of propulsive technologies have been proposed, but

most would utilize purpose-built, largely elevated rights of way through the existing landscape. The construction of such a system is not feasible for consideration as mitigation for the impacts of the Revised Project for several reasons.

First, ZECMS require very large capital investments and have extensive geographical coverage, and thus are disproportionate to the impacts of an individual project. In 2008, EMMI Logistics estimated the building cost for a complete MagLev system between the Ports and the ICTF at $161million (American Maglev Inc., 2008), and the cost of building it to a proposed container sorting facility in Bell at another $700 million; the recent experience of the high-speed rail project suggests that these are underestimates.

Second, although LAHD could authorize additional loading tracks at on-dock yards within the Port boundaries, the alternative rail transportation system would have to extend well beyond the on-dock yards to areas beyond the Port. Additionally, the project applicant/tenant has no means to implement such system-wide transportation improvements nor does the applicant/tenant or Port have any jurisdiction over such systems.

Third, such a measure would require a substantial reorganization of the regional goods movement system, besides having widespread construction-related impacts of its own. A zero-emissions rail transportation system may be implemented by the goods movement industry, including the Ports, in the future if it proves to be technologically and operationally feasible, practicable to build (considering jurisdictional, environmental, cost, and land use issues), and economically feasible to operate.

Fourth, there is no guarantee that any of the technologies involved is feasible. In 2006 the Ports solicited proposals for zero-emissions container movement systems from potential vendors and commissioned a third-party evaluation of the resulting 13 concepts (see the "Roadmap for Moving Forward with Zero Emission Technologies at the Ports of Los Angeles and Long Beach" [POLB and POLA, 2011]). The evaluation concluded that there were no zero-emissions solutions for locomotives and rail transportation as a whole that could be implemented in the near term. A second solicitation in 2009 resulted in seven responses, and the evaluation report stated that the third-party panel of experts did not believe that any of the proposed concepts was sufficiently mature to warrant the commitment of port and public resources to a full-scale operational deployment. Although some additional effort was devoted to developing a technology demonstration, none of the efforts have progressed. Given the lack of further interest by potential vendors in zero-emission container movement systems, even at the pilot project level, the Port has concluded that the state of the technology has not advanced since the 2008 – 2011 efforts, and the ZECMS concept is still not feasible. However, the Ports continue to be engaged in the identification, evaluation, and demonstration of regional-scale zero-emission rail options, as set forth in the 2017 CAAP.

Vessel Re-Deployment: Re-deploying the cleanest cargo vessels to the Port has been suggested as a mitigation measure. However, because vessel deployment decisions are solely the responsibility of the shipping lines and involve international commerce, neither the Port nor the marine terminals have the ability to mandate the deployment of the cleanest vessels to San Pedro Bay. The Ports' most promising approach to the issue is through incentives, and they are pursuing the deployment of the cleanest cargo vessels to San Pedro Bay through Los Angeles' Environmental Ship Index and Long Beach's Green Ship Incentive Program. As a result, in 2018, nearly one in three vessel calls to the Port of Los Angeles qualified for the Tier 2 incentives. In addition, the Ports continue to work

with vessel operators and designers and other ports to promote the use of emissions control technologies, clean fuels, and additional incentive and variable-rate strategies to reduce vessel emissions.

On a port-wide basis, the CAAP guides the efforts of the two ports to develop and implement feasible emissions reduction programs. The Ports of Los Angeles and Long Beach originally developed the CAAP in 2006 with input from a number of stakeholders, including the USEPA, CARB, and SCAQMD. The CAAP was updated in 2010, and underwent a revision in 2017, with the 2017 CAAP Update adopted in November 2017. The CAAP has in some cases achieved emission reductions of criteria pollutants, toxic air contaminants, and GHG in excess of those required by existing federal and state regulations, and in others has accelerated achievement of the reductions anticipated in the regulations. Through the CAAP and the associated programs, emission reduction technologies have been tested and are being developed to produce commercially viable mitigation for Port emission sources. The CAAP and updates, as well as accomplishments of Port-wide emission reduction programs can be reviewed at:

- https://www.portoflosangeles.org/environment/caap.asp
- https://www.portoflosangeles.org/environment/ogv.asp
- https://www.portoflosangeles.org/environment/progress/initiatives/technology-advancement-program/.

The CAAP will continue to push technological improvements for emission reductions at a pace faster than regulations alone. However, the Ports cannot yet rely on any programs in this update to be available and appropriate for claiming additional emission reductions in the Recirculated DSEIR. As technologies become technologically feasible, economically viable, and commercially available in the region, they will become requirements at the Port of Los Angeles as stated in lease measure LM AQ-1: Cleanest Available Cargo Handling Equipment and LM AQ-3: Demonstration of Zero Emissions Equipment (Recirculated DSEIR, Section 2.5.2.2).

2.3.1.4 Master Response 4: Non-Compliance with the Original FEIR MMs

Several comments requested that the LAHD address past non-compliance with the mitigation measures in 2008 EIS/EIR. This response describes the background of the Proposed Project and the CEQA requirements for consideration of past activities.

Sections 1.2.3 and 1.2.4 of the Recirculated DSEIR describe in detail the background of the Revised Project, including the status of the lease with China Shipping and the reasons for the non-compliance with some mitigation measures. As explained in Section 1.2.4.1, the 2008 EIS/EIR included an aggressive suite of 52 mitigation measures, many of which had never been attempted anywhere in the world. Despite the far-reaching nature of some of these measures, LAHD believed, at the time, that these measures were realistic and could be implemented at the CS Terminal within a reasonable timeframe. However, LAHD made this determination without the benefit of any evidence or feedback from the operator, as China Shipping did not participate in the 2008 EIS/EIR process and did not provide any information to LAHD on whether the measures could be feasibly and effectively implemented. It was not until later, when LAHD sought to amend the lease with the new mitigation measures, that China Shipping first informed LAHD that technological, economic, and operational challenges that made implementation of certain mitigation measures, under the terms and timeframes required, operationally or

economically infeasible. Section 1.2.4.2 summarizes the issues raised by China Shipping with respect to the feasibility of these mitigation measures. LAHD has been working to identify ways to revise these mitigation measures to make them feasible so that they can be implemented and provide the intended environmental benefits. The Recirculated EIR identified and analyzes the potential environmental impacts of possible changes to these mitigation measures. This is the required process under CEQA for addressing the need to revisit mitigation measures, and it allowed LAHD to analyze all issues thoroughly and carefully and to propose mitigation measures that can be successfully implemented. If it is determined that changes to existing mitigation measures are recommended on the basis of the Recirculated DSEIR, the Board of Harbor Commissioners will consider amending the lease for operations at Berths 97-109 to include those measures.

LAHD acknowledges comments that suggest that action should have been taken against China Shipping to address the non-compliance with the original mitigation measures. However, as explained in Section 1.2.3.2 of the Recirculated DSEIR, the ASJ allowed for China Shipping to continue operating the terminal under the existing lease (Permit No. 999) signed in 2001. While the lease was supposed to have been amended after certification of the 2008 EIR, "[t]he preparation of an EIR is not generally the appropriate forum for determining the nature and consequences of prior conduct of a project applicant . . .." (*Eureka Citizens for Responsible Gov't v. City of Eureka* (2007) 147 Cal.App.4th 357, 371.) Any action by LAHD to enforce mitigation measures (past or future), or other lease provisions, would be a separate proceeding outside the scope of this EIR process.

2.3.1.5 Master Response 5: Comparative Emissions

Several comments refer to "excess emissions," "foregone emissions," "future excess emissions," and similar terms, and some of those comments allege that the Recirculated DSEIR did not disclose those emissions. Note that the term "excess emissions" is not employed or defined in the CEQA statute or guidelines, and the SEIR does not use that term in its analysis. In these responses, LAHD assumes the terms "excess emissions" and "foregone emissions" refer to the difference between the operational emissions in past and future years if all 2008 EIR mitigations had been deployed (identified in the Recirculated DSEIR as the "FEIR Mitigated" scenario) and the actual emissions that occurred in the past with partial implementation of 2008 EIS/EIR mitigation measures, and would occur in the future, under the Revised Project.

LAHD disagrees with the comments alleging that the Recirculated DSEIR did not disclose these emissions. Please see responses to comments SCAQMD-28, NRDC-6 through NRDC-13, and NRDC-17. A comparison of emissions between the Revised Project and FEIR Mitigated scenarios yields the figures that the commenters are referring to, and those comparative emissions were presented, for informational purposes only, in Table 3.1-11 in the Recirculated DSEIR (page 3.1-60 of Section 3.1) for the peak-day emissions for past (2012, 2014, 2018) and future (2023-2030, 203, 2045) years. Analogously, Appendix B1 of the Recirculated DSEIR presents the annual emissions for each scenario both as a total figure and by source category, for every analysis year and each scenario. The subtraction of total yearly emissions from tables B1-669 and B1-661, for the Revised Project and the FEIR Mitigated Scenario, respectively, represents the comparative emissions on an annual basis. For the reader's convenience, and for informational purposes only, Table MR 5-1, showing the difference between the annual emissions for each scenario (Revised Project and FEIR Mitigated), is presented below.

Furthermore, as shown in Table 3.1-11, the incremental difference between FEIR Mitigated Scenario emissions and past actual emissions (on the one hand) and between FEIR Mitigated emissions and future emissions of the Revised Project (on the other hand) is often, although not always, considerably smaller than the incremental difference between 2008 Actual Baseline emissions and past/future emissions of the Revised Project. Table 3.1-11 shows that peak-day VOC emissions in 2014 under the Revised Project were 328 pounds per day higher than the 2008 Actual Baseline, and that peak-day VOC emissions under the FEIR Mitigated Scenario would have been 299 pounds per day higher than the 2008 Actual Baseline. The "differences between scenarios" column of that table therefore discloses that peak-day VOC emissions in 2014 under the Revised Project were only 29 pounds per day higher than under the FEIR Mitigated Scenario. Therefore, even if CEQA required comparison of the Revised Project to a fluctuating "FEIR Mitigated Scenario" baseline for purposes of impact-significance determination (which it does not), comparison to such a baseline would generally understate the impacts of the Revised Project, relative to the impacts identified and assessed for significance in the Recirculated Draft SEIR in comparison to a 2008 baseline.

With respect to comments that the Recirculated DSEIR should analyze and mitigate for the impacts of the non-compliance period, CEQA does not require that a supplemental EIR for proposed changes to a previously approved project assess mitigation to reduce or avoid impacts of the project that occurred prior to approval of the proposed change. Moreover, there is no requirement under CEQA that LAHD must provide a full public accounting of past activities at the Project site. Nonetheless, after the release of the Draft EIR for the Revised Project, several comments requested that LAHD consider the period between 2008 and 2014, when some of the mitigation measures in the 2008 EIS/EIR were not being fully implemented as required, as part of the project description. The LAHD decided to expand the analysis of the Revised Project to include this "Partial Implementation Period" as a project element and added three interim years – 2012, 2014, and 2018 – to the analysis. For informational purposes only, the Recirculated DSEIR also discloses emissions that occurred between 2008 and the present due to incomplete implementation of mitigation from the 2008 EIS/EIR (see Table 3.1-11).

Table MR 5-1. Difference between the Revised Project and the FEIR Mitigated scenario for total annual emissions (tons/year)

Pollutant	Analysis Year	Revised Project	FEIR Mitigated Case	Revised Project minus FEIR Mitigated
VOC	2012	32.88	31.07	1.81
	2014	53.09	51.79	1.3
	2018	67.27	38.26	29.01
	2023	60.08	36.69	23.38
	2030	33.79	34.50	-0.71
	2036	33.58	39.59	-6
	2045	30.00	38.93	-8.94
CO	2012	293.39	289.52	3.87
	2014	562.99	568.81	-5.82
	2018	555.71	137.29	418.41
	2023	418.72	187.73	230.99
	2030	225.17	202.30	22.87
	2036	225.34	213.29	12.06
	2045	217.54	211.17	6.36

Pollutant	Analysis Year	Revised Project	FEIR Mitigated Case	Revised Project minus FEIR Mitigated
NOx	2012	469.55	419.65	49.91
	2014	800.57	707.91	92.66
	2018	898.90	768.39	130.52
	2023	742.46	688.32	54.14
	2030	551.94	545.84	6.1
	2036	397.47	397.81	-0.34
	2045	264.89	271.49	-6.6
PM_{10}	2012	15.33	14.13	1.2
	2014	19.09	17.89	1.2
	2018	20.22	18.72	1.5
	2023	20.07	19.10	0.96
	2030	19.58	19.51	0.07
	2036	18.06	18.11	-0.05
	2045	16.73	16.86	-0.13
$PM_{2.5}$	2012	12.52	11.42	1.11
	2014	14.06	12.97	1.1
	2018	15.31	13.84	1.46
	2023	14.32	13.37	0.95
	2030	13.44	13.36	0.07
	2036	11.97	12.01	-0.04
	2045	10.69	10.80	-0.11
SOx	2012	8.65	5.45	3.2
	2014	8.42	7.88	0.54
	2018	10.74	10.53	0.21
	2023	10.00	9.52	0.48
	2030	10.10	9.60	0.5
	2036	10.02	9.51	0.51
	2045	9.93	9.42	0.51

Source: RDSEIR Appendix B1 Tables B1-661 and B1-669.

2.3.2 Responses to Comment Letters

2.3.2.1 California State Clearinghouse

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

November 19, 2018

CITY OF LOS ANGELES
NOV 26 2018
ENV MGMT DIV
HARBOR DEPARTMENT

Christopher Cannon
City of Los Angeles Harbor Department
425 S. Palos Verdes Street
San Pedro, CA 90731

Subject: Berth 97-109 [China Shipping] Container Terminal Project
SCH#: 2003061153

Dear Christopher Cannon:

SCH-1

The State Clearinghouse submitted the above named Supplemental EIR to selected state agencies for review. The review period closed on November 16, 2018, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
1-916-322-2318 FAX 1-916-558-3184 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2003061153
Project Title Berth 97-109 [China Shipping] Container Terminal Project
Lead Agency Los Angeles, Port of

Type SIR Supplemental EIR

Description The Recirculated Draft SEIR is a complete recirculation of the Draft SEIR released on June 16, 2017. The significant new information int he Recirculated Draft SEIR centers around the evaluation of the operation of the terminal from 2008-2014 under the set of mitigation measures approved in a previously certified 2008 EIR, to the extent those were implemented, and its continued operation in the future under new and/or modified mitigation measures, along with an incrementally higher cargo throughout level compared to that assumed in the 2008 EIR. The analysis examines whether potentially new significant environmental impacts or substantially more severe impacts would occur in the areas of Air Quality, Greenhouse Gases, and Ground Transportation.

Lead Agency Contact

Name Christopher Cannon
Agency City of Los Angeles Harbor Department
Phone (310) 732-3675 **Fax**
email
Address 425 S. Palos Verdes Street
City San Pedro **State** CA **Zip** 90731

Project Location

County Los Angeles
City
Region
Lat / Long
Cross Streets Front Street and Pacific Avenue
Parcel No. 744-002-5904
Township **Range** **Section** **Base**

Proximity to:

Highways I-110 & 47
Airports
Railways
Waterways
Schools Dodson, Barton Hill
Land Use Heavy Industrial ([Q] M3-1).

Project Issues Cumulative Effects; Other Issues; Air Quality

Reviewing Agencies Resources Agency; Department of Boating and Waterways; California Coastal Commission; Department of Fish and Wildlife, Region 5; Department of Parks and Recreation; California Highway Patrol; Caltrans, District 7; Air Resources Board; State Water Resources Control Board, Division of Water Quality; Regional Water Quality Control Board, Region 4; Department of Toxic Substances Control; Native American Heritage Commission; Public Utilities Commission; State Lands Commission; San Gabriel & Lower Los Angeles Rivers & Mountains Conservancy

Date Received 09/28/2018 **Start of Review** 10/03/2018 **End of Review** 11/16/2018

Note: Blanks in data fields result from insufficient information provided by lead agency.

Response to Comment SCH-1

The State Clearinghouse's acknowledgement of its receipt of the Recirculated DSEIR is noted. No further response is required.

2.3.2.2 South Coast Air Quality Management District

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL & USPS:
ceqacomments@portla.org
Christopher Cannon, Director
City of Los Angeles Harbor Department
Environmental Management Division
P.O. Box 151
San Pedro, CA 90731

November 30, 2018

Recirculated Draft Supplemental Environmental Impact Report (DSEIR) for the Berths 97-109 [China Shipping] Container Terminal Project (SCH No.: 2003061153)

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document for the China Shipping Container Terminal Project (Project). Approved by the Los Angeles Harbor Commission (LAHC) 10 years ago, the Port of Los Angeles (Port) was committed to implementing mitigation measures that would reduce significant air quality impacts from the Project. However, in 2017, the Port released the original DSEIR proposing to revise 10 of 52 mitigation measures that were approved for the Project in 2008, six of which were directly targeted towards reducing significant air quality impacts. SCAQMD staff has consistently expressed concern, including in our September 29, 2017 comment letter[1], regarding the Port's failure to enforce the mitigation measures from the 2008 EIR, as well as other concerns regarding the analysis. Now, with this Recirculated DSEIR, the inadequate mitigation and underestimation of impacts remain a serious concern and a violation of CEQA.

SCAQMD-1

The Recirculated DSEIR acknowledges the Project results in significant regional air quality impacts[2]; exceeds localized ambient air pollutant concentrations[3]; and results in exposure to significant levels of toxic air contaminants (TAC)[4]. The Recirculated DSEIR is severely lacking in enforceable mitigation measures and fails to make a commitment towards the adoption of all feasible measures. SCAQMD staff is concerned that the Project has been allowed to continue to operate in flagrant violation of the conditions from the 2008 Project and that any delay in certifying this Recirculated DSEIR continues to exacerbate the problem. At the same time, SCAQMD staff is concerned that this Recirculated DSEIR, if certified as it is, will permanently result in a weakening of the Port's commitment and CEQA obligation to implement all feasible measures to mitigate air quality impacts from the Project. As mentioned in our previous comment letter, SCAQMD staff seek a Project that ensures implementation of all feasible

[1] South Coast Air Quality Management District. September 29, 2017. *Staff Comments*. Accessed at: http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2017/dseir-chinashipping-092917.pdf

[2] Criteria Pollutants: CO 2012-2023, NOx 2014-2036, VOC 2014-2045

[3] Ambient Concentrations: NO_2- Federal one-hour 2014-2018, state one-hour 2014, PM10- annual and 24-hour 2014-2045

[4] Health Risk: 25.4 in a million, 25.9 in a million, and 21.4 in a million, for residential, occupational, and other sensitive receptors, respectively.

SCAQMD-1 measures, as required by CEQA, such as zero or near-zero emission trucks and cargo handling equipment to mitigate significant air quality impacts. More details are discussed as follows.

SCAQMD-2 As a preliminary matter, the Port must explain how the lease will be amended to incorporate adopted mitigation measures. The Recirculated DSEIR explains that many of the mitigation measures are triggered by the "effective date of a new lease amendment", which is anticipated around 2019, but the existing lease, Permit No. 999, does not terminate until 2045. The Port acknowledged that many of the 2008 mitigation measures were not implemented because China Shipping refused to amend Permit No. 999 to incorporate the requirements. The Port does not explain the legal mechanism for now requiring an amendment to Permit No. 999, and without an ability to require a lease amendment, the Port may again be unable to fully implement adopted mitigation. CEQA requires that mitigation measures must be "required, in, or incorporated into, the project." (*Federation of Hillside & Canyon Associations v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1260 citing Pub. Res. Code § 21081). The requirement for enforceability ensures "that feasible mitigation measures will actually be implemented as a condition of development, and not merely adopted and then neglected or disregarded." *Id.* at 1261. Without assurance that the Port can require the mitigation measures be put into this lease, or another enforceable mechanism, the Port is unable to meet this standard.

SCAQMD-3 The China Shipping Container Terminal Project is a major project for the Port, with significant air quality impacts to the nearby environmental justice communities and the region as a whole. As shown in Table 3.1-9 and 3.1-10 of the Recirculated DSEIR, the 2014 NOx emissions are substantially higher (1,200 lbs/day) than emission estimates from the 2008 Project largely due to a failure to implement mitigation measures. The Recirculated DSEIR should take more aggressive actions to accelerate zero-emission vehicles and equipment that are currently and/or expected to be commercially available during the life of the Project, instead of relaxing and removing key air quality mitigation measures with no replacement measures, resulting in even less mitigation than the 2008 EIR. This is in spite of major technological advances since the 2008 EIR. As the lead agency, the Port must adopt all feasible mitigation measures that can substantially lessen the project's significant impacts. (Pub. Res. Code § 21002, CEQA Guidelines § 15002(a)(3).)

SCAQMD-4 Removal of mitigation, and failure to provide adequate substitute measures, will increase emissions in and around the Port and delay the implementation of zero or near-zero emission trucks and equipment at China Shipping, and potentially throughout the Port. The critical attainment date for federal ozone ambient air quality standard (AAQS) of 2023 is quickly approaching and the efforts of the Port are vital for SCAQMD to fulfill the goals set-forth in the AQMP and our obligation under the Clean Air Act (CAA). If NOx emission levels continue to increase, the Project will potentially hinder the SCAQMD's ability to meet 2023 federal ozone AAQS. SCAQMD is required to attain the federal and state AAQS as expeditiously as practicable, and the failure to do so will result in negative repercussions, including strict implementation of contingency measures and backstop measures affecting the entire region, especially the ports. Therefore, the mitigation measures associated with the Project play a vital role in reducing emissions through timely implementation of the cleanest available technology and should be aimed at decreasing future emissions from goods movement.

Furthermore, the removal of key air quality mitigation measures from the 2008 EIR, and the failure to implement adequate substitute measures, is inconsistent with the Port's overall

SCAQMD-4

objectives towards emissions reductions in the 2017 Final Clean Air Action Plan (CAAP) Update. Also, reducing health risks from individual port development project's by establishing an incremental cancer risk of 10 in a million was one of the original and fundamental objectives of the CAAP[5]. Therefore, the Port must do more to mitigate the air quality and health risks impacts from the Revised Project, to the maximum extent that is feasible and practicable. Specifically, the Port should keep the commitment to zero and near-zero emission trucks and equipment, and pursue integration of zero-emission technologies into Port-related goods movement by adopting a new phase-in schedule. As shown in Attachment B, SCAQMD is supporting many ongoing demonstration projects that are expected to demonstrate the commercial feasibility of zero-emission cargo transporting equipment, such as drayage trucks and cargo handling equipment. Maintaining the commitment to demonstrate and deploy zero and near-zero emission trucks and equipment is necessary to mitigate the project's significant air quality impacts. Without this commitment, the increased emissions resulting from the Revised Project could have detrimental consequences to the entire region, including the ports, by contributing towards the region's nonattainment of federal and state standards. The Port must contribute in facilitating towards the advancement of a zero-emissions goods movement future. This further demonstrates the Port's commitment towards implementing the CAAP and helping the region meet clean air standards. More detailed comments are provided in the Attachments.

SCAQMD-5

The Port must aggressively look at all options and opportunities for emissions reductions from the Project to offset the foregone reductions from the lack of implementation of mitigation measures previously committed to and reduce emissions into the future. Thank you for the opportunity to provide comments on the Recirculated DSEIR. We look forward to working with the Port to address the comments raised herein and any other questions that may arise. We recommend setting up a meeting with SCAQMD staff, the project applicant, and Port staff to address these concerns expressed in this letter. Please feel free to call me at (909) 396-3176, if you have questions or wish to discuss our comments.

Sincerely,

Jillian Wong

Jillian Wong, Ph.D.
Planning and Rules Manager
Planning, Rule Development & Area Sources

Attachments
LAC181002-11
Control Number

[5] 2017 Final Clean Air Action Plan Update, Page 26. "The initial CAAP also made reducing health risk from individual port development projects an important objective by setting an increment threshold of 10 in a million excess residential cancer risk for new projects.
For the 2017 CAAP Update, the Ports remain committed to this 10 in a million threshold to manage health risk from individual port development projects, as well as to achieving the 2020 Bay-wide health risk reduction goal. At the same time, the Ports will continue to work with State, regional and local regulators and stakeholders to determine how continued reductions in emissions and an ever-improving baseline, and recent changes made by the State Office of Environmental Health Hazard Assessment (OEHHA) to procedures for calculation of health risk, could affect the way these goals are evaluated by the Ports in the future. The Ports will continue to evaluate whether this health risk threshold should be modified on a case-by-case basis for future redevelopment projects, particularly if new information or guidance arises."

ATTACHMENT A

SCAQMD-6

SCAQMD Staff's Summary of Project Description

SCAQMD staff understands that the Revised Project involves continued operation of the China Shipping Container Terminal under new or modified mitigation measures previously approved in the 2008 Final EIS/EIR. Modifications are proposed for 10 of the 52 mitigation measures that were approved in 2008, including six that are related to air quality. The Revised Project also assumes an increase in the projected cargo throughput of 147,504 twenty-foot equivalent units (TEUs) from the 1,551,000 TEUs projected in the 2008 Final EIR to 1,698,504 TEUs estimated for years 2030 and 2036-2045 in the Recirculated DSEIR. The China Shipping Container Terminal lease with the Port will expire in year 2045.

SCAQMD-7

SCAQMD Staff's Comments on Mitigation Measures (MM)

The emissions from the Revised Project already exceed the emissions projected in 2008 and will continue exceeding SCAQMD's CEQA significance thresholds into the future, negatively impacting the region and surrounding environmental justice communities. Therefore, SCAQMD staff recommends the Port set emissions reductions targets for the Project that are more aggressive than the originally approved mitigation measure reductions, and that are consistent with SCAQMD's recommended revisions to mitigation measures and the air quality attainment goals of the 2016 AQMP. The Project-based emissions reductions targets should use more recent Port growth projections, 2016 AQMP emissions inventories, and updated technology assessments to help determine the Project's fair share of emissions reductions. The emissions reductions targets will also help monitor the progress of emissions reductions by the Project, and ensure necessary actions by the Terminal operator and tenant for successful and effective implementation of the CAAP's Technology Advancement Program (TAP) and Clean Trucks Program (CTP), particularly zero or near-zero emission heavy-duty trucks.

Feasibility Determination

SCAQMD-8

SCAQMD staff is concerned with the Port's feasibility determination used to propose modifications to the approved mitigation measures in the 2008 EIR. For example, the mitigation measures in the 2008 approved Project included MM AQ-22 - Periodic Review of New Technology and Regulations, requiring a new technology review no less than every seven years, which would have subsequently prompted the implementation of new equipment, if proven feasible. Accordingly, a review of different new technologies should have been completed by 2015, seven years after the Project was approved. Without this required technology review, the proposed mitigation measures MM AQ-15, MM AQ-16, MM AQ-17, and MM AQ-20 should not be dismissed on the grounds of infeasibility.

The Recirculated DSEIR states that failure to implement the mitigation measures committed to in 2008 was due to a lack of feasibility determined by China Shipping. To illustrate this point, page 1-11 of the Recirculated DSEIR states that Cosco Shipping lost $1.44 billion in 2016. This is approximately equal to the 9,906,003,000 RMB loss found on page 3 of Cosco Shipping's 2016 Annual Report[6], using a conversion rate of 6.95 Chinese yuan to 1 US dollar[7]. While this financial loss occurred in the same year of Cosco's significant merger with China Shipping, other years demonstrate that this one-time loss is not indicative of long-term profits. For

[6] Cosco Shipping 2016 Annual Report. Available Here: http://en.chinacosco.com/attach/0/2016%20Annual%20Report.pdf
[7] Unit conversion rate. Accessed November 28, 2018. https://www.bloomberg.com/quote/USDCNY:CUR

SCAQMD-8

example, Cosco's most recent annual report shows that it made a profit of 2,661,936 RMB (~$382 million) in 2017[8] and also recorded annual profits since at least 2013[9].

Further, when the Port makes the finding that the recommended mitigation measures are not feasible, the Port should describe the specific reasons for rejecting them in the Final SEIR (CEQA Guidelines Section 15091).

Effective Start Date of Mitigation Measure Modifications

SCAQMD-9

Under CEQA Guidelines section 15126.4(a)(2), "Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments." SCAQMD staff is concerned with the enforceability of the modified mitigation measures that are scheduled to take effect one year after the effective date of a new lease amendment between the tenant and the Port. If issues are raised in the signing of the lease amendment, potentially delaying the scheduled implementation of these mitigation measures, then emissions reductions foregone since 2008 will continue to occur and impact the surrounding environmental justice communities, who are already affected by poor air quality resulting from activities at the Port. Therefore, SCAQMD staff recommends that all mitigation measures stating it will take effect after "the effective date of a new lease amendment between the Tenant and the LAHD," be revised to, "the date of certification of the Final Supplemental Environmental Impact Report (SEIR)." This recommendation will expedite the implementation of the modified mitigation measures by binding the effective start date to the earliest possible date and ensure a more timely compliance schedule, reflecting a similar date as the originally proposed date of effect of January 1st, 2019, in the 2017 DSEIR. Further, contingency measures should be put in place with approval of the Final SEIR to ensure that even if mitigation is not implemented on the SEIR's schedule that emissions reductions will occur. These measures should be crafted to provide sufficient motivation to ensure that commitments are followed through by the Port and China Shipping.

Mitigation Measures Modifications

SCAQMD-10

In order for the Project, and the Port as a whole, to ensure timely implementation of a zero-emission goods movement future, aggressive deployment of zero and near-zero emission CHE, cleaner trucks, and stringent mitigation, where feasible, is a must. Since the approval of the Project, a number of mitigation measures have been foregone, generating a substantial increase in emissions that were already at a level considered significant and unavoidable. The further weakening of the commitment to emissions reductions has harmful implications on the nearby communities. Therefore, SCAQMD staff strongly recommends that the Port maintain the original commitment to emissions reductions and has the following suggestions on how to achieve these reductions.

MM AQ-20 LNG-Fueled Drayage Trucks

SCAQMD-11

The Port excluded this measure in the Revised Project. The complete removal of this mitigation measure, which previously required the Port to phase in LNG-fueled drayage trucks entering

[8] Cosco Shipping 2017 Annual Report. Available Here: http://en.chinacosco.com/attach/0/2017%20Annual%20Report.pdf
[9] Cosco Shipping 2013-2015 Annual Reports. Available here: http://en.chinacosco.com/col/col1096/index.html

SCAQMD-11

and/or exiting the terminal, has substantial implications to air quality in the areas surrounding the Ports. Notably, LNG-fueled trucks made only six percent of truck calls operated by WBCT, including the Revised Project, while a Port-wide average of LNG-fueled drayage trucks was 10 percent.[10] The Port fell short of the commitment of 70% by 2014 and 100% by 2018 set forth in the 2008 approved Project, by a large margin.

SCAQMD staff disagrees with the LNG-fueled drayage trucks feasibility determination and urges the Port to re-commit to the mandate with a revised schedule. The complete removal of this measure shows a lack of commitment on the Port's behalf, in achieving a zero-emission goods movement future. Since the approval of this mitigation measure in 2008, near-zero natural gas-fueled drayage technology has advanced beyond the prototyping stage and has become commercially available and in-use today. Therefore, SCAQMD staff recommends the Port adopt a target phase-in schedule for near-zero (e.g., low-NOx natural gas) or zero-emission trucks, such as, but not limited to, the one included below, rather than removing a truck measure completely.

> Implementation of near-zero or zero-emission heavy-duty trucks entering the Berth 97-109 Terminal could be targeted in the following percentages.
>
> - 10 percent in 2019
> - 25 percent from 2020 through 2022
> - 50 percent from 2023
> - 100 percent by 2029

SCAQMD-12

Since China Shipping typically does not contract directly with truck fleets entering the Berth, other feasible alternatives to facilitate this goal should be analyzed. One approach could include China Shipping establishing a preferred rate structure or other operational benefits for beneficial cargo owners (BCO) that contract with trucking fleets that utilize near-zero and zero-emission truck fleets first, then other alternatively fueled drayage trucks. This would incentivize BCOs to contract with cleaner truck fleets and contribute to the deployment of cleaner drayage trucks. Additionally, the Port should consider initiating a clean air fund with the approval of the Revised Project to pay for emissions reductions nearby that would be feasible should other emissions reduction approaches prove infeasible. This approach has been used by other projects in the region, and should be pursued again for the Revised Project. This fund could incentivize the purchase of near-zero and zero-emission trucks elsewhere, vessel retrofits, etc. Even if it is not feasible to fund the entirety of foregone emissions reductions, the Final SEIR should commit to the level of funding that is feasible. As another option, the Port could require China Shipping to provide incentives for zero or near-zero emission heavy-duty trucks entering their property through financial incentives, such as reduced rates, or operational benefits, such as a fast-track system.

MM AQ-9 Alternative Maritime Power

SCAQMD-13

The Port is proposing to decrease the rate of compliance of OGVs calling in to China Shipping connecting to shore power, which reduces emissions primarily from auxiliary engines otherwise maintained in the on position throughout the berthing process, from 100% to 95%. SCAQMD

[10] *Ibid*. Chapter 2, *Project Description*. Page 2-5.

SCAQMD-13

staff found that the Port Inventories showed that 99% of vessel calls to the China Shipping Terminal connected to AMP in 2016, and 96% in 2017. Therefore, proposing a lower compliance rate than what has been achieved in previous years on the grounds that implementation of the approved mitigation measure requiring 100% compliance is infeasible, is not supported. SCAQMD staff recommends that the Port require at least 99% of vessel calls to connect to AMP immediately after Final SEIR certification, or no later than January 1, 2020, as it has been demonstrated achievable and feasible in 2016 at the same terminal.

MM AQ-10 Vessel Speed Reduction Program (VSRP)

SCAQMD-14

The Port is proposing to modify the VSRP measure, which currently requires 100% of ocean going vessels to comply, to only require 95% compliance. Considering the Port's 98% compliance rate in 2015, and 96% compliance rate in years 2014 and 2016, the Port should require a 98% compliance rate immediately after Final SEIR certification, or no later than January 1, 2020, which was achieved in 2015. The Port currently gives a discount to ships that comply with the VSRP, meaning ships are incentivized to comply, not required. Another option to achieve a higher compliance rate would be to require a mitigation fee for non-compliance on those vessels choosing not to participate. Additionally, ships choosing not to comply on poor air quality days should have an increased mitigation fee to further offset the hazardous localized risk of emissions resulting from activity at the ports.

MM AQ-15 Yard Tractors at Berth 97-109

SCAQMD-15

The Port is proposing an alternative phase-in schedule for yard tractors being turned over from Liquefied petroleum gas (LPG) to engines with emission standards of 0.02g/bhp-hr for NOx and Tier 4 final for all other criteria pollutants. The Port is proposing a five-year phase-in schedule for all LPG 2011 and older yard trucks to be replaced. However, five years is far too long considering the federal ozone critical attainment date of 2023 is only five years from the date of recirculation, much less from an effective start date of the modified measures. Natural gas and zero-emission yard tractors have moved past the prototyping stage and are commercially available for deployment today. To help expedite the emissions reductions needed to attain the federal ozone AAQS, the Port should require that all LPG yard trucks 2011 and older be replaced within one year of Final SEIR certification with zero-emission yard tractors. Otherwise, they should be replaced with low-NOx engines at 0.02 g/bhp-hr or lower. In addition, 2012 and newer LPG yard tractors should be replaced within two years of Final SEIR certification with zero-emission yard tractors.

MM AQ-17 Yard Equipment at Berth 97-109 Terminal

SCAQMD-16

The Port is proposing an alternative phase-in schedule for the replacement of forklifts, top picks, RTGs, sweepers, and shuttle buses ranging from three years to seven years. SCAQMD staff is not only concerned with the effective start date of the scheduled implementation, as mentioned above, but also with the overarching delay of phasing in new equipment over a seven-year timeframe. Therefore, SCAQMD staff recommends that the Port optimize emissions reductions by speeding up the phase-in schedules of each type of equipment. Detailed comments on each equipment type provided below.

SCAQMD-16

Aside from the phased replacement of yard equipment, the second requirement of the originally approved MM AQ-17 was to conduct a one-year electric yard tractor pilot project, in which two electric yard tractors were to be deployed at the terminal within one year of lease approval, subsequently prompting a feasibility determination that could have potentially phased-in electric yard tractors, replacing half of the terminal's fleet within five years. While the Revised Project includes a commitment to a similar project, referred to in the Recirculated DSEIR as a one-year zero-emission demonstration project, the window of potential benefit from the project approved in 2008 has passed. SCAQMD staff urges the Port to commit to completing the project as expeditiously as practicable.

Additional comments regarding the modifications to the phase-in schedule of various equipment types are provided below.

Forklifts

SCAQMD-17

The phase-in schedule being proposed would not replace 18-ton diesel forklifts, with engines 2007 or older, until three years after the effective start date. SCAQMD staff recommends speeding up the implementation schedule and require engines to meet the low NOx emission standard of 0.02 g/bhp-hr, if commercially available within one year of Final SEIR certification. In the event low NOx is not commercially available, forklifts with Tier 4 final engines shall be deployed as quickly as possible. The 5-ton diesel forklifts should be replaced with zero-emission forklifts within one year of Final SEIR certification.

Top Picks

SCAQMD-18

The phase-in schedule being proposed would not replace top picks of model years 2014 or older, until five years after the effective start date. SCAQMD staff recommends speeding up the replacement schedule and require engines, model year 2007 or older within one year of Final SEIR certification, and model year 2014 or older within two years of Final SEIR certification, be replaced with top picks that meet the low NOx emission standard of 0.02 g/bhp-hr, if commercially available. In the event low NOx is not commercially available, top picks with Tier 4 final engines should be deployed under the same phase-in schedule.

Rubber Tired Gantries

SCAQMD-19

The phase-in schedule being proposed would not start replacing RTGs, with diesel engines 2005 or older, until seven years after the effective start date. The last step of implementation includes the installation of four all-electric RTGs and one diesel-electric hybrid meeting engine standards of Tier 4 final for PM and NOx. The electrical infrastructure necessary to support the installation of four all-electric RTGs is already in place[11]. Therefore, SCAQMD recommends speeding up the implementation schedule through a step down approach for the replacement of remaining diesel RTGs within two years of Final SEIR certification in the following order: 1) all electric RTGs, if technically and operationally feasible, 2) hybrid-electric RTGs that meet or exceed emissions standard 0.02g/bhp-hr for NOx if commercially available, and 3) hybrid-electric RTGs that meet or exceed Tier 4 final for all other criteria pollutants.

[11] *Ibid.* Section 3.1, *Air Quality and Meteorology.* Page 3.1-54

SCAQMD-20

Sweepers

The Port is proposing to replace all current sweepers with alternatively fueled sweepers, or the cleanest available technology, within six years of the effective start date. SCAQMD staff recommends expediting the implementation schedule by requiring all sweepers to be alternatively fueled, or cleanest available technology, within one year of Final SEIR certification.

SCAQMD-21

Shuttle Buses

The Port is proposing to replace all current shuttle buses with zero-emission shuttle buses within seven years of the effective start date. SCAQMD staff recommends expediting the implementation schedule by requiring all shuttle buses to be zero-emission within one year of Final SEIR certification.

Supplemental Mitigation Measure Recommendations

SCAQMD-22

Ship Retrofits

SCAQMD staff recommends that the Port include a new mitigation measure for ocean going vessels which would require the demonstration of feasible NOx and PM retrofit technologies, working with the tenant, and providing incentives for implementation of these technologies. The potential for emissions reductions associated with OGVs is substantial since a significant portion of the Project's emissions are coming from OGVs due to an increase in the projected cargo throughput. Implementation of these measures would help offset the emissions reductions already foregone from 2008 to the present.

SCAQMD-23

Turn Times

The Port should consider alternative measures to address foregone emission reductions and existing significant air quality impacts. One possibility is to incentivize greater efficiency of the terminal. For example, a recent article[12] found that the West Basin Container Terminal (including China Shipping) had the worst turn times (111 minutes) in either the port of LA or LB. It is not clear how these slow turn times are consistent with MM AQ-21 from the original EIR that requires idling of less than 30 minutes when trucks visit the terminal, among other requirements. This inefficiency increases the cost to the entire supply chain, increases emissions as trucks idle waiting for their loads, and makes mitigation more expensive to implement by decreasing the number of turns each truck can make. Measures that get at rewarding faster turn times, and that disincentivize slower turn times should be included in the Recirculated DSEIR and subsequent lease amendment.

This mitigation measure would increase operational efficiency and facilitate the goal of the 2017 Final CAAP Update, in which a one-hour turn time from in-gate to out-gate is achieved through integration and optimization of a reservation system, ensuring each truck is on-site for less than one-hour for a dual-transaction. Additionally, a fee or penalty for missing designated

[12] https://www.ttnews.com/articles/harbor-truckers-express-cautious-optimism-turn-times-2017

SCAQMD-23

appointments or reservations, whether it be due to China Shipping or WBCT, should be imposed on the party at-fault to further disincentivize excessive turn times.

SCAQMD Staff's Comments on Technical Air Quality and Health Risks Analyses

Health Risk Assessment and Air Quality Modeling

Significant Cancer Risk

SCAQMD-24

The Recirculated DSEIR found that the Revised Project results in incremental individual cancer risks of 25.4 in a million, 25.9 in a million, and 21.4 in a million, for residential, occupational, and other sensitive receptors, respectively. This would exceed the CEQA significance threshold of 10 in a million[13], whereas the FEIR Mitigated Scenario would have resulted in an incremental cancer risk below CEQA significance thresholds[14]. Although there is an increase in potential health risks as a result of the Revised Project, the Port has not proposed any additional mitigation measures to minimize health risks. Instead, the Port is proposing to operate the Terminal under less stringent mitigation measures, which lessen emissions reductions from those approved in the 2008 EIR. As such, SCAQMD staff recommends the Port provide additional mitigation measures to minimize increased health risks associated with the Revised Project. Specific comments on the mitigation measures is provided later in this Attachment.

Air Dispersion Modeling-Locomotive Release Height

SCAQMD-25

Based on a review of Table B2-1: AERMOD Source Parameters, the analysis included separate sources for locomotives operating during the day and during the night. Release heights for locomotives operating at night were set higher than for locomotives operating during the day (e.g. 5.6 meters for Offsite-Day and 14.6 meters for Offsite-Night). The Port referenced CARB's 2004 Roseville Rail Yard Study to justify the use of different release heights to account for daytime and nighttime conditions. However, the study used Industrial Source Complex Model Short Term Version 3 (ISCST3) to conduct the dispersion modeling, which did not have the ability to account for variations in atmospheric conditions. Here, the Port used AERMOD to conduct dispersion modeling, which already accounts for the diurnal patterns. By using a higher release height for nighttime locomotives, the analysis has likely underestimated health risks. SCAQMD staff recommends the Port include additional mitigation measures to reduce the underestimated health risks.

Based on Table B2-1: AERMOD Source Parameters footnote a, SCAQMD staff found that the Port has adjusted release heights for volume, area, and line sources higher than the actual exhaust release heights. However, the Port has not provided the methodology to justify these adjustments. By using higher release heights, it is likely that the Port has underestimated health risks due to an increased rate of dispersion at the increased release height. SCAQMD staff recommends the Port include additional mitigation measures to reduce the underestimated health risks.

[13] *Recirculated DSEIR.* Appendix B3, Table B3-6. Maximum Health Impacts Estimated for the Revised Project, Page B3-24.
[14] *Ibid*. Page B3-29.

SCAQMD-25

Additionally, for locomotives, the Port has divided the release height by 2.15, instead of 4.3, to obtain the initial vertical dimension. Per Table 3-2 of the AERMOD User Guide[15], the initial vertical dimension for elevated sources not on or adjacent to a building is equal to the vertical dimension, which in this case is the release height, divided by 4.3. With a higher initial vertical dimension, it is likely that the Port has underestimated health risks. SCAQMD staff recommends that the Port include additional mitigation measures to reduce the underestimated health risks.

Mitigation Measure Assumptions

MM AQ-9 Alternative Maritime Power Assumptions

SCAQMD-26

The Port is proposing to modify MM AQ-9, which required 100% of vessel calls to connect to Alternative Maritime Power (AMP), to only require 95% of vessel calls to comply. However, in the air quality methodology section, the Port states, "peak day of OGV emissions for years 2023-2045 assume usage of AMP for all vessels at berth during the peak day, based on mitigation requirements from both the Revised Project and the FEIR Mitigated scenario."[16] Assuming both scenarios comply with the original AMP commitment is failing to analyze the difference between emissions resulting from the FEIR mitigated scenario and the Revised Project scenario. To be consistent with the assumption for MM AQ-9, SCAQMD staff recommends the Port provide additional information clarifying the AMP assumptions in both the FEIR Mitigated and Revised Project scenarios and include additional mitigation measures to reduce the additional impacts.

MM AQ-20 Liquefied Natural Gas (LNG)-Fueled Drayage Trucks Assumptions

SCAQMD-27

In the Revised Project scenario, the Port assumed that LNG would fuel 8.2% of drayage trucks entering and/or exiting the terminal, on the basis that 8.2% was the Port's LNG-fueled truck average in 2014. SCAQMD staff is concerned with this assumption, considering the Revised Project was below average in LNG-fueled trucks entering and/or exiting the terminal in 2014 (six percent). Since the Port is proposing to remove MM AQ-20, the air quality analysis should reflect this and assume LNG will fuel 0% of drayage trucks entering and/or exiting the terminal, regardless of port-wide averages, to analyze a true worst-case scenario, and additional mitigation measures should be included to reduce the additional impacts.

Air Quality Management Plan (AQMP) Consistency Analysis

SCAQMD-28

The air quality analysis in the Recirculated DSEIR concluded that the Revised Project is consistent with the AQMP. The 2016 AQMP did not take the Revised Project into account when calculating its emissions inventory. Additionally, the Revised Project has already resulted in foregone emissions reductions since 2008. The AQMP relies on commitments made by the Port and others to ensure that emissions reductions occur on time to meet federal and state standards. Since the Revised Project is a setback on the previous air quality commitments, the consistency of the Revised Project with the AQMP should be fully analyzed in the air quality section. Because of the precedent the Revised Project is setting by failing to meet previous commitments,

[15] U.S. EPA. April 2018. AERMOD User Guide. Accessed at: https://www3.epa.gov/ttn/scram/models/aermod/aermod_userguide.pdf

[16] *Recirculated DSEIR.* Appendix B1, Section 3.1.5, Page B1-11

SCAQMD-28

SCAQMD staff recommends that the Port analyze the consistency of the Revised Project with the AQMP in the air quality section by addressing the emissions reductions foregone in past years and the estimated increase in emissions resulting from the Revised Project's mitigation measure modifications, and disclose these results in the Final SEIR.

Entire attachment is AQMD 29

ATTACHMENT B

ZERO EMISSION TRUCK TECHNOLOGIES

Overview

Zero emission trucks, including heavy-duty trucks, are developing rapidly with some of the technologies ready for near-term deployments. Zero emission trucks can be powered by grid electricity stored in a battery, by electricity produced onboard the vehicle through a fuel cell, or by "wayside" electricity from outside sources such as overhead catenary wires, as is currently used for light rail and some transit buses. All such technologies eliminate fuel combustion and utilize electric drive as the means to achieve zero emissions and higher system efficiency compared to conventional fossil fuel combustion technologies. Hybrid electric trucks with all-electric range (AER) can provide zero emission operations in certain corridors and flexibility to travel extended distances powered by fossil or renewable fuels (e.g. natural gas) or hydrogen for fuel cells. In collaboration with regional stakeholders and partners as well as leveraging funding support from both federal and state agencies, SCAQMD has been supporting a number of projects, as described below, to develop and demonstrate zero emission cargo transport technologies to promote and accelerate its market acceptance and deployment.

2014 DOE Zero Emission Cargo Transport Demonstration Project (ZECT II)

Project Description

In August 2014, SCAQMD received an award of approximately $9.7 million from the DOE to develop and demonstrate seven zero emission drayage trucks in real world drayage operations at the Ports of Los Angeles and Long Beach. Six of them will be of fuel cell range extended electric trucks and the remaining truck will be built on a hybrid electric drive platform using a CNG auxiliary power unit as described below:

Fuel Cell Range Extended Trucks (FCREs)

a. Under project management by Center for Transportation and Environment, Kenworth and BAE Systems are developing a battery electric truck with hydrogen fuel cell range extender. This project will leverage the expertise of BAE Systems to test their hybrid electric fuel cell propulsion system, currently used for transit buses, in drayage applications. The power output of the electric drivetrain is comparable to currently used Class 8 truck engines power output. AC traction motors will be mounted one on each rear drive axle and the electric drivetrain in the architecture is set up to be fully redundant. The vehicle will operate primarily from the batteries, engaging the fuel cell system only when the batteries reach a specified state of charge. BAE anticipates that the 30 kg of hydrogen (25 kg usable) will provide approximately 110 to 120 miles of range between re-fueling.

b. Hydrogenics will develop a hydrogen fuel cell drayage truck powered by their latest advanced fuel cell drive technology (Celerity Plus fuel cell power system) and Siemens' ELFA electric drivetrain, customized for heavy duty vehicle applications. The proposed fuel cell drayage truck is designed to be capable of delivering over 150 miles of zero emission operation with 10-15 minutes fast refueling of hydrogen. The fuel cell drivetrain will be customized, tested and optimized for port applications.

c. TransPower will develop two battery electric trucks with hydrogen fuel cell range extenders. The fuel cell range extender project is to use TransPower's proven ElecTruck™ drive system as a foundation and add fuel cells provided by Hydrogenics, one of the world's leading suppliers of hydrogen fuel cells. The proposed project will result in the manufacturing and deployment of two demonstration trucks, one with a 30 kW fuel cell and one with a 60 kW fuel cell, enabling a direct comparison of both variants. The higher power output of the 60 kW systems is expected to be better suited for trucks carrying heavy loads over longer distances that might exceed the average power capacity of the 30 kW systems. The system will store 25-30 kg of hydrogen onboard based on an estimated 7.37 miles per kg fuel economy. TransPower's system also includes a bi-directional J1772-compliant charger that can recharge the vehicle batteries or provide power export.

d. U.S. Hybrid will develop two battery electric trucks with an onboard hydrogen fuel cell generator. U.S. Hybrid has been involved with fuel cell-powered vehicles for several years (including cargo vans, transit/shuttle buses and heavy-duty military vehicles) and believes the technology and product has reached maturity beyond feasibility and is ready for commercial demonstration deployment. The truck is powered by a lithium-ion battery with an 80 kW hydrogen fuel cell generator in charge sustaining mode, eliminating the need for charging. The fuel cell power plant is sized to sustain continuous operation based on average power demand for drayage applications. As a result, the battery size is significantly reduced, as is the required charging infrastructure. The proposed technology will provide a 150-200 mile range between refueling. Each truck will carry approximately 20 kg of hydrogen storage at 350 bar with an estimated fueling time of less than 10 minutes.

The fuel cell Class 8 trucks are expected to initiate demonstration at local trucking fleets over the next 3-18 months.

Plug-In Hybrid Electric Trucks (PHETs)

e. Under project management by Gas Technology Institute, Kenworth and BAE Systems will develop a PHET with a CNG range extender. The proposed technology is capable of providing a well-balanced blend of all electric and CNG-based hybrid operations. The electric drivetrain will be based on BAE Systems HybriDrive® Series (HDS) propulsion system hardware. The electric drivetrain will be capable of combined propulsion power output of 320 kW (430 hp) continuous using two AC traction motors. The power output of the electric drivetrain is comparable to currently used Class 8 truck engines power output. The truck will be designed to provide an operating range of 150 miles with 30 all-electric miles.

Cost
Cost estimates are not available for these trucks although with incentives the cost to customers is expected to be in line with other similar technologies, and the costs are expected to be substantially reduced once these trucks reach a wide-scale deployment and full-production phase.

Timeline and Commercialization
The demonstration phase of this project was started in Q2 2018 with two trucks, one each from TransPower and US Hybrid and the other trucks to start demonstration in Q1 and Q2 of 2019. The project is set be completed by Q3 2019 although talks have begun with the DOE to extend the project by an additional year. The commercialization process will continue in other projects for two of the technologies demonstrated by Kenworth. The Kenworth CNG Hybrid will continue to be developed in the CARB Zero Emission Drayage Truck Demonstration Project described below and the Kenworth Fuel Cell Range Extended truck will continue developed with a recently CARB awarded project with the Port of Los Angeles.

CARB Zero Emission Drayage Truck Demonstration Project

Project Description
SCAQMD received an award of approximately $23.6 million to develop and demonstrate zero emission drayage trucks under CARB's Low Carbon Transportation Greenhouse Gas Reduction Fund Investments Program in 2016. The project is to develop a total of 44 Class 8 drayage trucks based on a portfolio of most commercially promising zero- and near-zero emission truck technologies for statewide demonstrations, across a variety of real world drayage applications in and around the Ports of Long Beach, Los Angeles, Oakland, Stockton and San Diego, in collaboration with four other air districts: BAAQMD, Sacramento Metropolitan AQMD, SJVAPCD and SDAPCD. SCAQMD has contracted with three major U.S. OEMs and an international OEM, with necessary resources and networks to support future commercialization efforts, to develop and demonstrate four different types of battery and hybrid electric drayage truck technologies in this project, including: two battery electric platforms (BYD and Peterbilt), and two plug-in hybrid electric platforms (Kenworth and Volvo) as summarized below:

Battery Electric Trucks (BETs)

a. BYD, a global company with over $9 billion in revenue and 180,000 employees, will develop 25 battery electric drayage trucks for demonstration with multiple fleet partners across the state. The BET is optimized to serve near-dock and short regional drayage routes with a range of 70-100 miles, supported by 207 kWh batteries on board. The truck is designed to provide similar operating experience compared to equivalent diesel and CNG trucks with matching or exceeding power and torque, powered by two 180 kW traction motors. BYD will utilize 80 kW on-board charger to fully recharge the truck within 3 hours. These trucks are already eligible for incentive funds under CARB's HVIP.

b. Peterbilt, in partnership with TransPower, will develop 12 BETs in this project, building on a platform developed under the DOE ZECT I project, incorporating lessons learned from ongoing demonstrations to further refine and optimize the electric drive system. Eight trucks will be designed to provide 65 miles in range, powered by a 215 kWh

battery pack to support near-dock drayage operations, and four longer range BETs will incorporate a new battery design that allows for 120 miles of operation per charge with a 320 kWh battery pack at the same system weight with similar volume as the 215 kWh battery pack. These longer range BETs will be well suited for regional drayage routes such as from port terminals to Inland Empire and from the Port of Oakland to Sacramento and the San Joaquin Valley.

Plug-In Hybrid Electric Trucks (PHETs)

c. Kenworth expands its partnership with the BAE Systems to develop four PHETs with natural gas range extenders, leveraging the prototype development under the DOE-funded ZECT II project. These vehicles will target longer regional drayage routes. The team will continue refining the hybrid drivetrain to provide a system that can operate in a zero emissions (all-electric) mode and in a conventional hybrid electric mode to meet customer range needs and flexibility. The powertrain includes a 200 kW genset using a recently-certified 8.9L NZ CNG engine and two AC traction motors that produce 320kW (430 hp) continuous, with comparable power output to what is typically found in Class 8 truck engines. The hybrid system will be designed for an operating range of 150 miles with approximately 30-40 miles of all-electric range to operate in zero emissions mode in sensitive areas and disadvantaged communities.

d. Volvo will build on the success of past projects to develop three commercially attractive, highly-flexible hybrid trucks, with all-electric mode capability of up to 30 miles for zero emission operations and total daily range of up to 200 miles in hybrid electric mode. Volvo offers a unique approach to system-focused hybrid powertrain improvements, utilizing a suite of innovative technologies such as energy and emission optimized driveline controls; aerodynamics and weight improvements; vehicle energy management and driver coaching systems optimized for port drayage operation; and a complete suite of NOx reduction technologies, including engine and exhaust after-treatment innovations. Furthermore, Volvo, in partnership with Metro and UC Riverside, will also integrate ITS connectivity solutions, such as vehicle-to-infrastructure and vehicle-to-vehicle communication technologies, to improve dynamic speed harmonization and reduce idling, for better fuel economy and reduced emissions.

Cost

Cost estimates are not available for these trucks, although with incentives the cost to customers is expected to be in line with other similar technologies, and the costs are expected to be substantially reduced once these trucks reach a wide-scale deployment and full-production phase.

Timeline and Commercialization

The demonstration phase of this project started in Q2 2018 with 3 BYD trucks that have highlighted the need for some design modifications, Q3 2018 with Peterbilt trucks, and Kenworth and Volvo trucks to follow in 2019. This project is set be completed by Q2 2020 and the commercialization of these truck technologies will continue into the near term.

BYD Prototype Drayage Truck

Volvo PHET

CEC Sustainable Freight Transportation Project

Project Description

SCAQMD recently received a $10 million award from the CEC under the Alternative and Renewable Fuel and Vehicle Technology Program to develop and demonstrate zero and near-zero emission freight transportation technologies. One of the awarded technologies is electric drayage trucks, to be built on the PowerDrive™ platforms developed by Efficient Drivetrains, Inc., (EDI), a global leader and innovator of advanced, high-efficiency electric drivetrains and vehicle control software.

Under project management by Velocity Vehicle Group, this project is to develop and demonstrate four electric drayage trucks, consisting of one BET and three PHETs, with EDI serving as the technical lead and vehicle integrator, and Freightliner providing necessary engineering resources and expertise in vehicle design and glider manufacturing. Both battery electric and hybrid electric drive platforms will be designed to meet end-user fleet requirements. The platforms will be also designed so that it can be easily integrated by post-production truck modification service companies and serviced by Freightliner dealerships. Based on the proposed technical concept, the BET will be capable of 100 miles in operating range and the PHETs will utilize Cummins 8.9L natural gas engine as a range extender to provide 250 miles in operating range per fueling with up to 35 miles in all-electric range.

Cost

Cost estimates are not available for these trucks, although with incentives the cost to customers is expected to be in line with other similar technologies, and the costs are expected to be substantially reduced once these trucks reach a wide-scale deployment and full-production phase.

Timeline and Commercialization

This project is to be completed by Q4 2021 and the commercialization process of these truck technologies can be expected to continue into the near term.

Daimler Zero Emission Trucks and EV Infrastructure Project

Daimler Trucks North America (DTNA) was awarded $15,670,072 by SCAQMD with an equal amount of matching funds the project total will be $31,340,144 to develop battery-electric heavy-duty trucks. DTNA will demonstrate these trucks in real-world commercial fleet operations in and around environmental justice communities for a period of two years within SCAQMD's jurisdiction. DTNA will gather data and information from the end-users including performance under specific duty-cycle applications during the demonstration. DTNA will utilize the data and information to move toward the commercial production and sales phase. DTNA will supply five Class 6 trucks with a gross vehicle weight rating (GVWR) up to 26,000 pounds and 15 Class 8 trucks with a GVWR up to 80,000 pounds, including associated EV charging infrastructure. Fleet partners will be identified and the trucks integrated into a range of services and applications to gather operational data to improve each charging and utilization scheme, with seven of the Class 8 trucks to be used in port drayage operations, supporting the goods movement industry.

The drivetrain of the Class 6 electric trucks is capable of delivering over 220 horsepower, and the design allows for a burdened load with GVWR up to 26,000 pounds. Each charge of the battery can give operators 150-200 miles of service range, and the medium-duty design comes with a 4x2 axle configuration with a day cab of 106 inches. The batteries that come equipped with the Class 6 truck design will have a capacity of 225-300 kilowatt hours (kWh). The truck is capable of being charged with a Combined Charging Standard Type 1 (CCS T1).

The Class 8 truck model will be designed to have a range of 150-200 miles between charging. The electric drivetrain is capable of delivering over 455 horsepower and is designed to meet the needs and specifications of transportation of a GVWR of up to 80,000 pounds. The vehicles will have a 6x4 axle configuration with a 116-inch day cab, and the battery system will provide 400-600 kWh of usable power. The Class 8 vehicles will also use the CCS T1 charging systems.

DTNA will install DC fast charger stalls at four fleet locations providing an adequate number of chargers to support their fleet of 20 trucks. Each fast charger will be equipped with an SAE J1772 Combo (CCS T1) interface and will be capable of charging at up to 160 kW. The chargers will also be connected remotely for troubleshooting, management and data collection. Each DC fast charger will be paired with multiple battery energy storage systems (ESS) to optimize utility costs and reduce infrastructure enhancements required to support the chargers. DTNA will deploy the battery-based ESS paired with each high power vehicle charger. The proposed chargers will allow an 80% state of charge for the Class 6 trucks in two hours and the Class 8 trucks in three hours. Deploying two chargers per site will result in potential peak power demands of approximately 335 kW. The ESS will be comprised of two or more modular units paired with a single charger. Each unit will be capable of delivering 60-70 kW at 480 volts AC power and will store 110-120 kWh of energy. Utilizing grid-aware scheduling algorithms, the ESS will charge from the grid during low-cost periods and over extended periods of time. This allows the ESS to recharge from the grid at a much lower peak power demand, reducing utility and facility infrastructure requirements and reducing or eliminating utility demand charges.

Cost
Cost estimates are not available for these trucks, although with incentives the cost to customers is expected to be in line with other similar technologies, and the costs are expected to be substantially reduced once these trucks reach a wide-scale deployment and full-production phase.

Timeline and Commercialization
With funding support from SCAQMD, 20 battery-electric heavy-duty trucks will be immediately built and deployed in order that incredible amounts of data and information can be gathered from the diverse end-users and applications that will be run by these units. Funding from SCAQMD will accelerate the development and scaling of commercially available all-electric heavy-duty trucks in the marketplace. The timeline for the project is for the trucks are to be deployed starting in Q4 2018 and all 20 trucks and EV infrastructure fully deployed by the end of Q1 2019. The demonstration will begin immediately following deployment and continue through Q3 2021.

Volvo's Zero Emissions Heavy-Duty Trucks, Freight Handling Equipment Project

SCAQMD has received a $44,839,686 award from CARB in partnership with Volvo Group North America, LLC, (Volvo) to conduct a freight facility project that will realize commercialization and market penetration of heavy-duty battery electric vehicles (HDBEVs) in California and throughout North America. With an additional $41,655,308 in cash and cost share from Volvo, SCAQMD and partners, the total project cost will be $87,246,900.

Volvo will develop and demonstrate the following on-road and off-road vehicles, EV Infrastructure and solar power for deployment at up to five sites within the cities of Chino, Fontana, La Mirada, Ontario and Placentia:

- 23 on-road pre-commercial and commercial Heavy Duty Battery Electric Vehicles (HDBEV) operating in and around disadvantaged communities;
- 29 off-road BEVs used to load and unload containers and freight at warehouses and freight facilities;
- 58 nonproprietary chargers both DC fast charging and Level 2 electric vehicle supply equipment (EVSE) with SAE approved connectors; and
- 1,860,462 watts of solar power.

The project includes a total of up to 23 HDBEVs and will begin with up to 8 multiple-configuration, pre-commercial truck deployments. The first three demonstration trucks will not be fully approved for U.S. operation and will therefore operate under CARB exemption waivers. The subsequent 5 demonstration units as well as up to 15 commercial/pre-commercial vehicles, will be approved for the U.S. market. Volvo will begin commercial introduction of the HDBEV rigid trucks and use mobile fast charging for fleets throughout the state to gain freight experience with battery electric trucks.

Based on Volvo's proposal, the three electric truck configurations to be delivered are anticipated to be equipped with the following driveline items:

- Two electric motors with 370 kW max power (260 kW continuous power) with a Volvo two-speed transmission.

- Average electric range is 170 miles depending on drive cycle. Throughout the course of this project, vehicles will be able to go 150-350 miles.
- Lithium-ion batteries for energy storage will have a minimum capacity of 200 kWh for the first two demonstrators, later increasing to four and then six battery pack configurations for a capacity of 320 kWh.

Volvo will deliver new lithium-ion battery chemistries for increased electrical energy densities at reduced cost; self-learning control algorithms which optimize energy usage in EVs; smart technologies to improve vehicle uptime and deployment of long-term rentals of HDBEVs to fleets throughout the state to accelerate adoption. Additionally, Volvo will coordinate the development of energy management systems to optimize vehicle charging by balancing the requirements of the vehicle, facility and grid. Vehicle charging will use SAE J1772 connectors for Level 2 charging and SAE J3068 or SAE CCS connectors for fast charging. Charging infrastructure includes 150 kW DC or 22 kW AC for the first two demonstration units and 250kW DC or 44 kW AC for subsequent and commercialized units. The freight facility sites will each feature standards-based, open architecture and interoperable charging infrastructure for off-road electric equipment, on-road electric trucks and employee workplace charging. Two standards-based, open architecture and interoperable charging stations along a key freight corridor for use by project fleets and the public will also be deployed. Up to 58 chargers will be installed ranging from 7.2 kW up to 150 kW.

Cost

Cost estimates are not available for these trucks, although with incentives the cost to customers is expected to be in line with other similar technologies, and the costs are expected to be substantially reduced once these trucks reach a wide-scale deployment and full-production phase.

Timeline and Commercialization

The Volvo project is planned to begin in the Q1 of 2019 and be completed in Q1 of 2021.

Response to Comment SCAQMD-1

The history of the China Shipping Container Terminal Project is discussed in detail in Section 1.3 of the Recirculated DSEIR, including the basis for proposal of the Revised Project that is evaluated in this SEIR. As explained in detail in the Introduction and Project Description chapters of the Recirculated DSEIR, of the 52 measures adopted in the 2009 EIS/EIR, 10 mitigation measures and one lease measure from the 2008 EIS/EIR have not been fully implemented in a timely manner; re-evaluation by LAHD of those measures, based on the feasibility of those measures, subsequent availability of alternative technologies, and actual need for mitigation, has shown that certain measures identified in the 2008 EIS/EIR are unnecessary or infeasible, while others need to be modified to ensure their feasibility or to incorporate advances in technology. The Revised Project replaces those 2008 EIS/EIR mitigation measures that LAHD has determined are infeasible or no longer necessary and determines based on substantial evidence that no further or additional feasible mitigation is available for those impacts, or for the impacts of the Revised Project. In compliance with CEQA, and as is addressed in detail in Section 2.5.2.1 of the Recirculated DSEIR, the Revised Project comprises all feasible replacement mitigation measures for significant impacts of the China Shipping Container Terminal Project.

CEQA requires, however, that LAHD may not implement the revisions to mitigation that constitute the Revised Project until it has completed environmental review of the modified or deleted mitigation measures (See Napa Citizens for Honest Govt. v. Napa County Bd. of Supervisors (2001) 91 Cal.App.4th 342, 359). Therefore, the project approvals that were previously granted, based on the 2008 EIS/EIR, remain in effect without modification until such time as revisions to mitigation are approved after environmental review. LAHD is proceeding as expeditiously as possible with that process, which necessarily requires that it take the time necessary to ensure full and adequate compliance with CEQA.

With respect to zero and near-zero-emissions trucks and cargo handling equipment, please see Master Response 2: Zero-Emissions Technologies and Master Response 3: Port-Wide Emissions Reduction Programs.

Response to Comment SCAQMD -2

As explained in Section 1.2.3.2 of the RDSEIR, the ASJ allowed for China Shipping to continue operating the terminal under the existing lease (Permit No. 999) signed in 2001. While the lease was supposed to have been amended after certification of the 2008 EIR, "[t]he preparation of an EIR is not generally the appropriate forum for determining the nature and consequences of prior conduct of a project applicant . . .." (*Eureka Citizens for Responsible Gov't v. City of Eureka* (2007) 147 Cal.App.4th 357, 371). As required under CEQA, the Recirculated DSEIR will be used by LAHD, as the lead agency under CEQA, in making a decision regarding the future operation of the Revised Project. If it is determined that changes to existing mitigation measures are recommended as a result of the Recirculated DSEIR, the Board of Harbor Commissioners will consider amending the lease for operations at Berths 97-109 to include those measures. Any action by LAHD to enforce mitigation measures (past or future), or other lease provisions, would be a separate proceeding outside the scope of this EIR process. In addition, please refer to Master Response 4: Non-Compliance with the FEIR Mitigation Measures.

Response to Comment SCAQMD-3

Please see Master Response 2: Zero- and Near-Zero-Emission Technologies for a more detailed discussion of this issue. The LAHD agrees that there have been major advances in emissions reduction and control technology since 2008, including near-zero- and zero-emission technologies in the goods movement industry. As the 2017 CAAP discusses in considerable detail (2017 CAAP Section 1), the Port anticipates that marine terminals will transition to zero- and near-zero-emission cargo handling equipment by 2030, and the drayage industry to zero- and near-zero-emission trucks by 2035. As a clarifying point, please note that the figure of 1,200 lbs of NO_X per day cited in the comment is the difference between the Revised Project Scenario and the FEIR Mitigated Scenario in 2014, as shown in Table 3.1-11, not the 5,284 pounds per day difference in emissions between the Revised Project in 2014 and the 2008 baseline, which is disclosed in Table 3.1-9 for purposes of the SEIR's impact-significance determination between 2008 and 2014.

The LAHD disagrees with the comment's characterization of the Recirculated DSEIR as "relaxing and removing key air quality mitigation measures with no replacement measures." The Revised Project proposes to remove MM AQ-16 because it was determined to be completely redundant to MM AQ-17 and therefore achieved no additional emissions reductions, and MM AQ-20, because it was determined to be entirely infeasible. In the case of MM AQ-20, the concept of attempting to force an individual terminal to alter the drayage truck industry was determined to be infeasible (Recirculated DSEIR Section 2.5.2.2), meaning that there is no feasible replacement measure that could be applied to the CS Terminal. The remaining air quality measures were modified to make them feasible given the state of technology at this time. Accordingly, the Recirculated DSEIR does propose all feasible mitigation.

Furthermore, the LAHD does not agree that the environmental document for a single project (particularly one that does not include any physical modifications of the terminal) is the appropriate mechanism for mandating the introduction of zero-emission technologies that have yet to be proven feasible. The 2017 CAAP anticipates the introduction of technologies such as near-zero- and zero-emission cargo-handling and other goods movement-related equipment, but explicitly points out that most of those technologies are not yet available for application in the port environment. The 2017 CAAP and the 2018 Feasibility Study (Tetra Tech/GNA, 2019b) do not identify any of these technologies as feasible for terminal-specific mitigation. At this time, near-zero- and zero-emission technologies are still in the pilot and demonstration phases, and forcing a marine terminal to employ them in large numbers, only to discover subsequently that they cannot do the work or are economically uncompetitive, would guarantee future non-compliance. The Recirculated DSEIR does provide for incorporation of currently unavailable technologies in the future, at such time as they are determined to be feasible: LM MM AQ-1 and LM AQ-3 obligate the CS Terminal to test and evaluate zero-emission equipment and to purchase such equipment as it is deemed feasible, consistent with the goals of the 2017 CAAP.

Response to Comment SCAQMD-4

As described in Section 2.5.2 of the Recirculated DSEIR, the mitigation measures that were modified under the Revised Project were determined to be either infeasible as initially formulated (e.g., MM AQ-20) or no longer relevant (e.g., MM AQ-16 and several transportation-related measures). The purpose of the SEIR is to modify infeasible

mitigation measures and to impose all feasible mitigation. Any increases in emissions are attributable to increased projected cargo throughput compared to the projections in the 2008 EIS/EIR and to the lesser effectiveness of feasible mitigation measures compared to the measures contained in the 2008 document that turned out to be infeasible.

With respect to consistency with the AQMP, it is important to note that the AQMP is not based upon commitments from specific projects analyzed under CEQA, and in fact neither the CS Terminal nor the Approved Project is referenced anywhere in the 2016 AQMP. Rather, the 2016 AQMP emissions inventory is based on CARB regulatory models and databases using existing fleet information; technologies based on the current fleet and the future effects on that fleet of adopted rules and regulations; and regional and sub-regional growth forecasts, including growth at the ports. The 2016 AQMP does not rely upon emission reductions from those mitigation measures, and those measures do not affect the 2016 AQMP control strategy. Please see Response to Comment SCAQMD-28 for more detail on this issue.

With respect to consistency with the 2017 CAAP, the Revised Project contains, and the Recirculated DSEIR analyzes, feasible mitigation that can be applied to reduce air emissions from operation of the CS Terminal. The Revised Project does not "remove key air quality mitigation measures from the 2008 EIR." Instead, it revises the mitigation measures to make them feasible in accordance with to current technology and operating practices. The Revised Project proposed to combine Mitigation Measure MM AQ-16 with MM AQ-17. The Revised Project proposed to eliminate MM AQ-20 because it was never feasible (see Response to Comment SCAQMD-3) and would not have achieved any emissions reductions. See Master Response 1: Feasible Mitigation – Guidance and Applicability and Master Response 2: Zero Emission Technologies for discussions of the infeasibility of MM AQ-20.

The 2017 CAAP anticipates the introduction of technologies such as near-zero- and zero-emission cargo-handling and other goods movement-related equipment, but explicitly points out that most of those technologies are not yet available for application in the port environment. As discussed in the Recirculated DSEIR (Section 3.1.4.4, Impacts AQ-3 and AQ-8), the Revised Project is consistent with the 2017 CAAP: it includes feasible mitigation measures that will reduce emissions and it includes provisions (LM AQ-1 and LM AQ-3) to incorporate advanced technologies into the CS Terminal's operations as they are deemed feasible.

The comment references Attachment B, which is a list of projects being supported by the District and CARB. Given that all of those projects are pilot and demonstration projects, many apparently not even underway at the time the list was prepared, the LAHD does not agree that the attachment supports a claim of current feasibility. In fact, as Master Response 2: Zero- and Near-Zero-Emission Technologies explains, none of the technologies listed in Attachment B has reached a stage of development sufficient to be deemed commercially and operationally feasible.

Response to Comment SCAQMD-5

The comment is noted and is hereby part of the Final SEIR. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment SCAQMD-6

The District's summary of the Revised Project is noted and is hereby part of the Final SEIR. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment SCAQMD-7

LAHD does not believe that it is feasible to establish emissions reductions targets beyond the reductions achieved by the feasible mitigation measures evaluated in this SEIR. With respect to the District's recommendations for more aggressive emissions reduction targets and mitigation measures, please see Master Response 1: Feasible Mitigation – Guidance and Applicability and Master Response 2: Zero-and Near-Zero-Emission Technologies; the mitigation measures in the Revised Project represent the most aggressive feasible measures that can at present be imposed on a single terminal through CEQA.

With respect to consistency with the 2016 AQMP, please see Response to Comment SCAQMD-28. With respect to the issue of Port growth projections, please note that, as described in Section 1.4.1, the Recirculated DSEIR used the most recent projections of Port cargo growth and terminal capacity available (i.e., 2016 projections). In fact, those data were the basis for including a revised estimate of future throughput at the CS Terminal as a factor in assessing the impacts of the Revised Project (Recirculated DSEIR Section 1.4.1.5); otherwise, the Recirculated DSEIR would have used the throughput projections in the 2008 EIS/EIR, resulting in substantially less impact than identified in this analysis.

With respect to technology assessments performed as part of the 2017 CAAP, see Master Response 2: Zero- and Near-Zero-Emission Technologies. All of the factors presented in that master response were taken into consideration, as suggested by the commenter, in developing mitigation measures that are feasible and can contribute to the Revised Project's fair share of emission reductions.

Response to Comment SCAQMD-8

With respect to the comment on the measure identified in the 2008 EIS/EIR's MMRP as "MM AQ-22 – Periodic Review of New Technology and Regulations," that measure was not imposed as a CEQA or NEPA mitigation measure on the original project approval. Rather, the 2008 EIS/EIR determined that measure did not meet all the criteria for CEQA or NEPA mitigation, and instead identified it as a lease measure with uncertain potential to reduce future emissions. Because the potential for MM AQ-22 to reduce emissions was not known, it was not included in calculating project emissions in the 2008 EIS/EIR. That measure, in combination with LM AQ-23 and as discussed in Section 2.5.2.1 of the Recirculated DSEIR, was not incorporated into the tenant's permit. As a result, the seven-year technology review was not implemented by 2015. Even if the review had taken place in 2015, none of the measures related to cargo-handling equipment (MM AQ-15, AQ-16, and AQ-17) would have been affected: the latter two had implementation dates prior to January 1, 2015, and MM AQ-15's implementation date was 1 January, 2015. In the case of MM AQ-20, which had implementation dates extending to 2018, a 2015 technology review would not have identified an alternative feasible technology given that there is still no such technology in 2019 (see Master Response 2: Zero-and Near-Zero-Emission Technologies). Please note that the original intent of LM AQ-22 – to facilitate the incorporation of lower-emission technologies into the operation of the CS

Terminal as they become available – is met by the Revised Project's LM AQ-1: Cleanest Available Cargo-Handling Equipment. That measure ensures periodic check-ins to verify that the CS Terminal's equipment replacement process is consistent with the goals of the 2017 CAAP regarding near-zero- and zero-emission equipment.

The LAHD disagrees with the District's characterization of the Recirculated DSEIR as having dismissed MMs AQ-15, AQ-16, and AQ-17 on the grounds of infeasibility. MM AQ-16 was not dismissed but rather combined with MM AQ-17 because there is actually no distinction between railyard equipment and container yard equipment. MMs AQ-15 and AQ-17 were not dismissed but were instead revised to reflect the realities of current cargo-handling equipment. The Recirculated DSEIR notes (Section 2.5.2.1) that, consistent with the findings of the 2017 CAAP, zero-emission technologies were not, at the time of publication, feasible for yard tractors, top-picks, and heavy-duty forklifts. However, the Recirculated DSEIR also notes that, in accordance with the goals of the 2017 CAAP, CARB, and the mayors of Los Angeles and Long Beach, such technology is expected to be phased in to the CS Terminal over the next decade (i.e., by 2030 at the latest). MM AQ-17 requires the CS Terminal to transition to all-electric RTGs in those areas of the terminal that can support them and explains why the entire RTG inventory cannot be converted to electric power without substantial terminal modifications. Furthermore, LM AQ-1 requires the terminal to work with the Port to attain the 2017 CAAP's equipment procurement goals (i.e., to transition to zero-emission CHE as soon as practicable).

MM AQ-20 was dismissed on the grounds of infeasibility based upon substantial evidence. As described in detail in Section 2.5.2.1 (pp 2-22 to 2-24) and the report "Assessment of the Feasibility of Requiring Alternative-Technology Drayage Trucks at Individual Container Terminals," cited in that section as LAHD (2017) and hereinafter the "Drayage Truck Study," the Port based its dismissal of MM AQ-20 on three factors: industry structural constraints, truck technology constraints, and financial constraints.

With regard to the financial issues raised in the comment, please note that at no point did the Recirculated DSEIR determine infeasibility exclusively on the basis of financial loss or hardship. The financial information in Chapter 1 of the Recirculated DSEIR was provide as background to illustrate the economic downturn that occurred after certification of the 2008 FEIR. China Shipping is a subsidiary of Cosco, not the entirety of that corporation, and Cosco's profits and losses are not necessarily indicative of China Shipping's economic performance in a given year. Furthermore, China Shipping's operations at the CS terminal must be financially competitive with the other terminals operating in the Ports, regardless of Cosco's global financial performance, meaning that very expensive mitigation measures may be unduly burdensome to the terminal.

The LAHD intends to comply fully with all requirements of CEQA with regard to mitigation measures determined to be infeasible.

Response to Comment SCAQMD-9

Please refer to Response to Comment CoSPNC-4. The Recirculated DSEIR explained this issue in detail in Section 2.5.2.1. Furthermore, binding the effective start date of mitigation measures to certification of the Final SEIR, as the District recommends, would not result in most of those measures actually being implemented. All of the measures require implementation by the CS Terminal's tenant, and the only way to obligate the tenant to implement the measures is through provisions of a lease amendment. As the District pointed out in its own comment, "Mitigation measures must be fully enforceable

through permit conditions, agreements, or other legally binding instruments." That is why the mitigation measures are scheduled based on the effective date of a new lease amendment.

With regard to contingency measures, it is unclear what specific enforceable measures the District has in mind, and without specific suggestions no further response is required (PRC 21091(d); CEQA Guidelines Section 15204(a)).

Response to Comment SCAQMD-10

The LAHD disagrees with the comment's statement that a number of mitigation measures have been "forgone" and with the comment's characterization of the Revised Project as a "further weakening of the commitment to emissions reductions." The Revised Project proposes to eliminate MM AQ-20, which was not implemented, as discussed in the Recirculated DSEIR (Section 2.5.2.2). It was determined to be infeasible as originally written and was therefore not included in the Revised Project because there is no feasible way to implement it on an individual terminal basis (see RDSEIR Section 2.5.2.2, the Drayage Truck Study, and Response to Comment SCAQMD-11). The remaining air quality measures were partially implemented, and the Revised Project has modified those measures to make them feasible given the state of technology at this time. The LAHD remains committed to achieving all emissions reductions within its authority and consistent with feasible technology. That commitment is clearly articulated in the 2017 CAAP.

Response to Comment SCAQMD-11

In removing MM AQ-20 from the Revised Project, the LAHD recognizes that, contrary to the expectations of the stakeholders in 2008, LNG trucks have not been successfully introduced into the drayage industry in sufficiently large numbers to support a requirement of 100% LNG trucks at any given terminal, and that a different approach is necessary. The LAHD disagrees with the District's statement that the removal of MM AQ-20 shows a lack of commitment to "achieving a zero-emission goods movement future". LNG trucks are not part of a zero-emission environment –they still emit air pollutants in the form of NOx, CO, and CO_2, although at lower rates than diesel trucks and without diesel particulate matter. They were conceived at the time as the best possible approach to reducing drayage truck emissions, but they turned out not to be successful at achieving that goal: as Mr. David Pettit of the Natural Resources Defense Council pointed out (KPCC, 2017), *"It was a huge experiment with public money, well meaning, and it didn't work. This is public money going to private industry to clean up the air pollution that private industry is causing. A lot of money was essentially wasted on subsidizing LNG trucks that were not successful in operation."* The failure to achieve substantial progress towards the goal of 100% LNG trucks reflects the trucking industry's real-world experience with LNG trucks, as highlighted in the KPCC article, and the realities of the goods movement industry, as described in the Drayage Truck Study and summarized in Section 2.5.2.1 of the Recirculated DSEIR.

As discussed in more detail in the Drayage Truck Study, Master Response 2: Zero- and Near-Zero-Emission Technologies, and Master Response 3: Port-Wide Emissions Reduction Programs, an industry-wide solution to drayage truck emissions is needed. The 2017 CAAP outlines that solution – the Clean Trucks Program's proposed fleet-wide transition to near-zero-emission (including LNG technology) and ultimately zero-emission trucks as they become economically and operationally feasible – and commits the ports of Los Angeles and Long Beach to pursuing and implementing that solution.

That commitment includes a schedule: the ports have a goal of achieving zero-emissions drayage operations by 2035. Considering that there are at this time no commercially available zero-emissions trucks capable of heavy-duty drayage operations, this is an ambitious goal; even the goal of a near-zero-emissions truck fleet in the near future is ambitious, given the regulatory and technological uncertainties outlined in the 2017 CAAP (see p. 34) and the enormous expense of replacing the older trucks. The District's comment suggests an even more aggressive schedule of zero-emissions by 2029 but does not provide any information on how to accomplish that goal.

Please note that the comment's statement that "LNG-fueled trucks made only six percent of truck calls operated by WBCT, including the Revised Project" is inaccurate: WBCT did not operate any trucks because it is a container terminal operating firm, not a trucking firm or licensed motor carrier (see also the letter from E. Wise to J. Sidley, March 25, 2015, which reiterates that "neither WBCT nor China Shipping provides over the road trucks or trucking services" [cited in footnote 94 of NRDC's comment letter as "Attachment 33 at POLA000995]). As described in the Drayage Truck Study, decisions about which trucks are sent to the WBCT-operated terminals are made by third parties. The percentage of LNG-fueled trucks servicing any given terminal is a product of those decisions and is out of WBCT's control.

Response to Comment SCAQMD-12

The comment suggests the inclusion of additional measures for facilitating the development of zero-emission trucks. The suggested measures are essentially the same, and would serve the same purposes, as those measures that are already included in the Recirculated DSEIR. A preferential access system for clean trucks (LM AQ-2 Priority Access for Drayage) would incentivize contracting with cleaner truck fleets. The establishment of an air quality fund (essentially, LM GHG-1 GHG Credit Fund) would be aimed at paying for emission reductions in the project vicinity. In addition, please note that the Clean Truck Program will impose fees on drayage trucks that do not meet the CARB's near-zero emission standard, once that is promulgated. Note also that the Port funds the Technology Advancement Program, some of the goals of which are consistent with the District's suggestion. Finally, the Port already funds the Port Community Mitigation Fund that is used to mitigate direct port impacts as consistent with the restrictions placed on the use of public trust funds for off-port purposes (summarized in a letter from J. Lucchesi, State Lands Commission, to Meghan Reese, Harbor Community Benefit Foundation, December 6, 2017).

Response to Comment SCAQMD-13

As the high compliance rates in the AMP data cited by the comment show, shipping lines are clearly making good faith efforts to achieve up to 100% compliance at the CS Terminal. A close look at the data in Table 2-1 of the Recirculated DSEIR shows, however, that they are not able to do so consistently – in 2015 the compliance rate was 94%, the highest compliance rate, in 2016, was 99%, and compliance fell to 96% in 2017. The Recirculated DSEIR (Section 2.5.2.1) discusses the reasons why requiring 95% is appropriate.

The 2017 CAAP (Section 1.5) also discusses the State's goal of achieving 100% compliance and outlines existing programs and future initiatives that the Port will undertake to increase compliance. However, the Ports have pointed out in their comment on CARB's proposed measure on at-berth emissions (POLB and POLA, 2019) that the CARB's requirement to control 100% of vessels calls is not realistic. They point to the

likelihood of redundant systems with severe physical challenges, they predict costs in the hundreds of millions of dollars with minimal emissions benefits, and they do not believe that whatever implementation scenario is chosen can be implemented within CARB's proposed deadlines. A compliance requirement of 95% is consistent with both POLA practice and the constraints to higher compliance rates due to emergencies and third-party vessels that are not AMP capable as discussed in the Recirculated DSEIR, and thus represents all feasible mitigation.

With respect to the suggestion that mitigation go into effect on the date of the FSEIR's certification, please refer to Response to Comment SCAQMD-9. With respect to a mitigation fee for non-compliance, please refer to Response to Comment CFASE-9.

Response to Comment SCAQMD-14

As the high compliance rates in the VSRP data cited by the comment show, shipping lines calling at the CS Terminal have approached 98% compliance at the 40 nm limit. However, MM AQ-10's required compliance rate of 100% has not been consistently achieved, particularly in the 20-40 nm zone, where compliance between 2012 and 2018 was often less than 95% for the major shipping lines (compliance rates of China Shipping vessels were consistently among the highest of the major lines). The Recirculated DSEIR (Section 2.5.2.1) discusses why requiring 95% is appropriate, and further points out that the effects on public health and air quality of a non-compliance rate of 5% are negligible. The 2017 CAAP (Section 1.4) also discusses constraints to achieving 100% compliance, and outlines the Ports' existing programs and future initiatives to increase compliance in the 20-40 nm zone. Based on the most recent data for 2017 and 2018 (see https://www.portoflosangeles.org/environment/air-quality/vessel-speed-reduction-program), the average compliance rate at the 40 nm limit for shipping lines calling at the Port has been approximately 85%. The Port of Long Beach's average compliance rate in 2017 was 91% (see http://www.polb.com/environment/air/greenflag.asp). A compliance requirement of 95% is consistent with both POLA practice and the constraints to higher compliance rates discussed in the 2017 CAAP and the Recirculated DSEIR and represents all feasible mitigation.

With respect to the suggestion that mitigation go into effect on the date of the FSEIR's certification, please refer to Response to Comment SCAQMD-9. With respect to a mitigation fee for non-compliance, please refer to Response to Comment CFASE-9.

Response to Comment SCAQMD-15

The phase-in dates for ultra-low NOx/near-zero-emissions yard tractors set forth in MM AQ-15 are the result of careful study by the LAHD, considering both the availability of the technology and the financial implications of replacing existing yard tractors at the CS Terminal that have substantial useful life left. Changes to MM AQ-15 require replacement of model years 2007 or older no later than one year after the effective date of a new lease amendment. This immediate turnover is tied to the useful life of the yard tractors that are in use at the CS Terminal and could, as a recent technology review by the LAHD's consultant suggests, be due as early as 2020. As described in that review, the Port's consultants contacted manufacturers of yard tractors to ascertain the availability of units equipped with any of several LNG or CNG-fueled engines CARB-certified to meet the 0.02 g/bhp-hr standard. As of 2017, no such units had actually been deployed, but the two manufacturers involved in near-zero-emission yard tractor production (TICO and Capacity) expressed confidence that an engine such as the Cummins Westport 6.7-liter ISL G Near-Zero engine would be readily adaptable to their tractor models. Cummins

Westport stated that large-scale production of that engine awaited a substantial demand, which had not yet appeared. The survey concluded that units might be available in adequate quantities to support a fleet replacement effort starting in 2020 to 2022, depending on the availability of the engine.

Please see Master Response 2: Zero- and Near-Zero-Emission Technologies, which discusses the feasibility of zero-emission technology in the port environment, and Response to Comment SCAQMD-3, which explains the problem with requiring unproven technologies as CEQA mitigation. The LAHD believes that it would be imprudent to require replacement of existing tractors with zero-emission yard tractors "within one year of Final SEIR certification" because there is no assurance that such tractors would be commercially available, let alone in sufficient quantities, by that time. As noted in the master response and in the 2017 CAAP, zero-emission technologies suitable for the container terminal environment are not, contrary to the comment's assertion, "commercially available for deployment today".

Given the uncertainty of the availability of near-zero- and zero-emissions yard tractors and the amount of remaining useful life on MY 2011 and newer yard tractors, the LAHD has determined that the phase-in schedule required by MM AQ-15 is the most aggressive feasible mitigation. The phase-in schedules in MM AQ-15 ensure that substantial emission reductions are achieved in the near term while zero emissions technologies mature sufficiently. As the Recirculated DSEIR explains (Section 2.5.2.1), the longer-term goal, supported by LM AQ-1, LM AQ-3, and LM AQ-22, is to convert the CS Terminal to zero-emission technology by 2030, consistent with the goal of the 2017 CAAP.

Please note that the federal ozone attainment deadline is completely unrelated to the feasibility of a particular technology; using that deadline as the basis for a mitigation measure's schedule could very well result in future non-compliance.

Response to Comment SCAQMD-16

The District's concern over the phase-in schedule for CHE is noted, but the reasons for that schedule were clearly explained in the Recirculated DSEIR (Section 1.2.4.2 and Section 2.5.2.1). To summarize, much of the CHE in service at the CS Terminal has considerable useful life remaining, and scrapping those units immediately and replacing them with more expensive Tier 4-compliant units would be prohibitively expensive. Nevertheless, MM AQ-17 does incorporate the need to achieve the objectives of the 2017 CAAP and of the original 2008 EIS/EIR with respect to reducing CHE emissions as soon as practicable. As stated on p. 2-20 of the Recirculated DSEIR, "The replacement schedule for CHE incorporated the useful economic service life of the existing equipment and the high capital costs (e.g., $650,000 per unit for toppicks; LAHD 2014) but accelerated the replacement." (Note that the citation LAHD 2014 in the Recirculated DSEIR has been changed to LAHD, 2016 in the FSEIR [p. 3-9].)

Please note that arbitrarily speeding up phase-in schedules for a mitigation measure is inadvisable, since phase-in cannot occur faster than equipment is proven and available in adequate numbers (please see Master Response 2: Zero- and Near-Zero Emission Technologies, for a discussion of the potential availability of such equipment for in-use deployment).

As stated in the Recirculated DSEIR and Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures, LAHD implements mitigation measures on

container terminal projects by including them in leases with its tenants. Since the tenant never signed the new lease, the 2008 mitigation measures were not included in the tenant's lease and could not be enforced by the LAHD. This situation applies to MM AQ-17, which, as the comment points out, required the tenant to participate in a one-year electric yard tractor pilot project. As stated in Table 2-1 of the Recirculated DSEIR, this pilot project was not implemented by the tenant, and the LAHD could not enforce this requirement through the tenant's lease. Section 2.5.2.2 of the Recirculated DSEIR includes a new lease measure, LM AQ-3, that, unlike MM AQ-17's yard tractor pilot project, calls for a one-year demonstration project with at least ten units of zero-emission cargo handling equipment along with feasibility assessments in 2020 and 2025, all leading to a goal of 100% zero-emission cargo handling equipment by 2030. This new lease measure is more robust than the original pilot project in MM AQ-17 and, like all other measures, would be implemented once a lease amendment occurs.

Response to Comment SCAQMD-17

Although low NO_x 18-ton forklifts are not currently commercially available (see Master Response 2: Zero- and Near-Zero Emission Technologies), please note that LM AQ-1: Cleanest Available Cargo Handling Equipment would ensure that, if available emissions control technology that exceeds the requirements of MM AQ-17 (e.g., low-NO_X or zero-emissions) is available at the time of equipment replacement, the CS Terminal would be required to purchase 18-ton forklifts with that technology.

With respect to the suggestion that the replacement schedule for 5-ton and 18-ton forklifts be related to the date of the FSEIR's certification, please refer to Response to Comment SCAQMD-9.

Response to Comment SCAQMD-18

As described in the Recirculated DSEIR (p. 2-19), the replacement schedule for toppicks/top handlers reflects the economic realities of replacing units with significant remaining useful life, given how expensive toppicks are ($650,000 for conventional units [Recirculated DSEIR p. 2-20], likely more for units with advanced emissions control). The schedule is based upon China Shipping's representations to the LAHD of replacement costs, as described in the Recirculated DSEIR (p. 2-19). Please note, too, that LM AQ-1: Cleanest Available Cargo Handling Equipment would ensure that, if available emissions control technology that exceeds the requirements of MM AQ-17 (e.g., low-NO_X or zero-emissions) is available at the time of equipment replacement, the CS Terminal would be required to purchase that technology.

Response to Comment SCAQMD-19

As described in the Recirculated DSEIR (p. 2-19 and p. 2-21), the replacement schedule for RTGs reflects both the economic realities of replacing units with significant remaining useful life, as represented to the LAHD by China Shipping, and the constraints to deploying all-electric units in most of the CS Terminal. MM AQ-17 would begin replacing diesel-powered cranes within three years of a new lease amendment, and by 2030 the RTG fleet would be electrified to the extent allowed by the CS Terminal's configuration.

Response to Comment SCAQMD-20

As described in the Recirculated DSEIR (p. 2-19 and p. 2-20), the replacement schedule for sweepers reflects the economic realities of replacing units with significant remaining useful life, as represented to the LAHD by China Shipping. With respect to

the suggestion that the replacement schedule for sweepers be related to the date of the FSEIR's certification, please refer to Response to Comment SCAQMD-9.

Response to Comment SCAQMD-21

As described in the Recirculated DSEIR (p. 2-19 and p. 2-20), the replacement schedule for shuttle buses reflects the economic realities of replacing units with significant remaining useful life, as represented to the LAHD by China Shipping. With respect to the suggestion that the replacement schedule for shuttle buses be related to the date of the FSEIR's certification, please refer to Response to Comment SCAQMD-9.

Response to Comment SCAQMD-22

A demonstration program for OGV retrofits would not result in substantial reductions of ongoing emissions, since at most two or three vessels would be involved. Such demonstrations have been undertaken in the past, and as described in the 2017 CAAP (sections 1.6 and 1.7) the ports continue to work with the shipping industry on reducing vessel emissions. Substantial emissions reductions can only be achieved by actions at the fleet level. Because the ports have no control over cargo vessels, the 2017 CAAP adopted the Clean Ship Program, which uses financial incentives to encourage deployment of cleaner vessels (i.e., those with Tier 2 and Tier 3 engines) to the San Pedro Bay area in higher numbers than would otherwise be the case and to discourage calls by Tier 0 vessels.

Furthermore, the 2008 EIS/EIR included, aside from the VSRP, four OGV mitigation measures, MM AQ-11 through AQ-14, that were aimed at requiring the use of low sulfur fuel and slide valves on main engines, and at encouraging the rerouting of cleaner ships and new vessel builds, since neither the Port nor the tenant has any direct control over the deployment and purchasing of vessels. These four OGV measures are not included in the SEIR because they would not be removed or modified as part of the Revised Project. In addition, MM AQ-14 New Vessel Builds already targets future technologies to reduce criteria pollutant emissions (NO_X, SO_X and PM) and GHG emissions from vessels through design considerations, which is consistent with the comment's suggestion.

Finally, CEQA does not require that a supplemental EIR for proposed changes to a previously approved project assess mitigation to reduce or avoid impacts of the project that occurred prior to approval of the proposed change. Nevertheless, for informational purposes only, the Recirculated DSEIR does disclose emissions that occurred between 2008 and the present due to incomplete implementation of mitigation from the 2008 EIS/EIR (see Table 3.1-11.) See also Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures.

Response to Comment SCAQMD-23

The comment has extrapolated from the figures for two months presented in the cited article to characterize WBCT's turn times as the worst in San Pedro Bay. Drayage truck turn times vary substantially from month to month at all terminals, largely as a result of short-term variations in cargo volumes, although also reflecting various other time-varying factors as well as different terminal configurations and operating modes (e.g., wheeled versus stacked). Accordingly, two months of data provide a very poor indication of overall performance for any terminal and should not be the basis for mandating a mitigation measure. The actual GeoStamp data used in the cited article (Harbor Trucking Association, 2018) shows that in 33 of the 48 months over the four-year period ending December 2018 WBCT's turn times were below the bay-wide

monthly average, and for the entire period the average turn time was the same as the bay-wide average (GeoStamp data provided by POLA, January 2019).

Please note, too, that turn times are not the same as idling times. Idling refers to the amount of time a truck is stationary on the terminal waiting to enter, leave, or be loaded/unloaded. Turn times are the total amount of time a truck spends on a transaction at a terminal. Data from the Port's annual emissions inventories, which track truck and equipment activity, indicate that WBCT, including the CS Terminal, was in compliance with MM AQ-21 between 2008 and 2014.

Nevertheless, the Recirculated DSEIR contains a measure (LM AQ-2 Priority Access for Drayage) aimed at improving the turn times of zero- and near-zero emissions trucks at the WBCT. While focused on a limited class of trucks, the measure is expected to have a beneficial effect on turn times at that terminal. However, long turn times at container terminals are a serious, port-wide issue that cannot be resolved by the piecemeal application of mitigation measures at individual terminals. Recognizing that problem, the goods movement industry, including the Port, has developed several port-wide programs aimed at improving supply chain efficiency, with the concomitant benefit of improving container terminal turn times. These include:

- E-Dray, a port logistics management collaborative that, among other things, allows shippers and trucking companies to improve the efficiency of drayage activities by matching up containers, shippers, and truckers in real time and by managing in-terminal container storage to minimize truck waiting times (www.edray.com);
- Port Optimizer (https://www.portoflosangeles.org/business/supply-chain/port-optimizer™), which is a partnership between the Port and GE Transportation that provides real-time supply chain data such as vessel arrival times and loading details, empty container logistics, and cargo volume forecasts; and
- the Off-Terminal Chassis Depot program, currently being developed by the Port, that will provide a centralized pool of empty chassis for use by the container terminals in both ports.

These port-wide programs, along with other collaborative efforts among elements of the goods movement industry, will help improve the efficiency of drayage operations at the Port. As the District's comment does not contain any specifics on what a mitigation measure aimed at turn times would include, no further response is required (PRC 21091(d); CEQA Guidelines Section 15204(a)).

Finally, CEQA does not require that a supplemental EIR for proposed changes to a previously approved project assess mitigation to reduce or avoid impacts of the project that occurred prior to approval of the proposed change. Nevertheless, for informational purposes only, the Recirculated DSEIR does disclose emissions that occurred between 2008 and the present due to incomplete implementation of mitigation from the 2008 EIS/EIR (see Table 3.1-11.) See also Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures and Master Response 5: Comparative Emissions.

Response to Comment SCAQMD-24

The LAHD acknowledges that the Revised Project's health risk impacts will be significant in comparison to the floating future baseline, and that impacts under the FEIR Mitigated Scenario would be less than significant in comparison to the floating future

baseline, as is disclosed in the Recirculated DSEIR. However, as the Recirculated DSEIR explains (Section 3.1.4.4, Impacts AQ-3 and AQ-8), no additional feasible mitigation is available to apply to the Revised Project (see also Master Response 1: Feasible Mitigation – Guidance and Applicability). With respect to the comment's characterization of the Revised Project's mitigation measures as "less stringent", please see Response to Comment SCAQMD-3. The comment recommends that the Port provide additional mitigation measures but offers no suggestions as to what those might be; accordingly, no further response is required (PRC 21091(d); CEQA Guidelines Section 15204(a)).

Response to Comment SCAQMD-25

The comment recommends that additional mitigation be provided on the basis that "it is likely that the Port has underestimated health risks." CEQA does not require that mitigation be imposed for a speculative assumption. As explained below, the LAHD has determined that the analyses in the Recirculated DSEIR were correct and that health risks were not underestimated.

In the Recirculated DSEIR, locomotives were modeled in AERMOD as non-buoyant line sources. The dispersion algorithms used by AERMOD for non-buoyant line, area, and volume sources have no allowance for plume rise (EPA, 2018a). This means that when applying the atmospheric conditions to emissions from those sources to predict their downwind dispersion, AERMOD assumes the emission plumes have zero upward momentum and neutral buoyancy. Therefore, for non-buoyant line, area, and volume sources, it is appropriate to manually adjust the vertical starting point for a plume in cases where momentum- and buoyancy-related plume rise is expected.

Because locomotives release their exhaust with upward momentum and thermal buoyancy, AERMOD's source heights were manually adjusted upward to equal the expected plume heights instead of the locomotive exhaust port heights. This same approach was used in health risk assessments for 17 major railyards prepared between 2007 and 2009 pursuant to the 2005 Statewide Railyard Agreement (CARB, 2013). For example, the analysis for the Dolores and ICTF Rail Yards (UPRR, 2007; Table 92), which was reviewed and approved by CARB, used AERMOD source heights identical to those used in the Recirculated DSEIR for off-site locomotives (Table B2-1).

The commenter states that AERMOD "already accounts for the diurnal [meteorological] patterns" when modeling the locomotive emissions as a line source, and therefore a manual adjustment to the source height is taking double credit for plume rise. That is not correct because, as stated above, the AERMOD line-source algorithm assumes no plume rise due to upward momentum or thermal buoyancy; it only accounts for diurnal variations. While diurnal meteorological patterns do affect the degree to which a plume disperses as it is carried downwind from the source, they do not have any effect on the starting height of the plume centerline.

The method for determining plume heights for moving locomotives was first developed by CARB in the Roseville Rail Yard Study (CARB, 2004). At that time, the approved regulatory dispersion model was ISCST3. However, the principle of adjusting a non-buoyant source height upward to equal the plume height is the same whether the dispersion model is ISCST3 or its successor, AERMOD. CARB accounted for the differences in atmospheric stability between daytime and nighttime conditions (specifically, the effects of stability on plume rise) to calculate different daytime and nighttime locomotive plume heights. As a result, different AERMOD source heights were

used in the Recirculated DSEIR for daytime versus nighttime. Without this adjustment, the pollutant concentrations predicted by AERMOD for locomotives would have been overstated because the modeled exhaust plumes would have been too low. Therefore, pollutant concentrations were appropriately predicted, health risks have not been understated, and additional mitigation measures are not warranted.

As explained above, a source height adjustment for non-buoyant AERMOD sources is appropriate when plume rise is expected. Accordingly, health risks were not underestimated and additional mitigation measures are not warranted.

With respect to the other sources in Table B2-1, the volume source heights for ships in transit, turning, and docking were obtained from the Recirculated Draft EIS/EIR for the Berth 97-109 [China Shipping] Container Terminal Project (LAHD, 2008). They are based on a series of visual observations of containership exhaust plumes near the Port of Los Angeles (SAIC 2006). The average plume heights were estimated to be 25 percent above vessel stack height for fairway and precautionary area transit, 50 percent above vessel stack height for harbor transit, and 100 percent above vessel stack height for turning and docking. The higher plume rise at slower ship speeds is the result of lower apparent (i.e., actual plus vessel motion) wind speeds. The resulting modeled plume heights, which range from 49.1 to 78.6 m above water, as shown in Table B2-1, agree reasonably well with the limited published literature that could be found, such as Liu et al. (2000) (240-300 m above water), CARB (2006) (50 m above water), Frick and Hoppel (2000) (200 m above water), Beecken et al. (2014) (50-70 m above water), and Murphy et al. (2009) (30-55 m above water). The volume source height for ships at anchorage was conservatively set at 44.5 m, which is the auxiliary engine stack height, because there was no visual plume observation made for ships at anchorage.

The methodologies for adjusting the line and area source heights for the remaining source types in Table B2-1 are as follows. The average plume heights above water or ground for tugboats, cargo handling equipment, and trucks were estimated through visual observations by Port staff to be 50 feet (15.2 m), 15 feet (4.57 m), and 15 feet (4.57 m), respectively (LAHD, 2008). These heights account for the exhaust port height plus a nominal amount of plume rise due to thermal buoyancy and upward momentum. The source height for rubber-tired gantry (RTG) cranes of 41 feet (12.5 m) is the average exhaust port height, provided by equipment manufacturers as reported by UPRR (2007). The source height for worker vehicles of 2 feet (0.61 m) is based on the CARB Risk Reduction Plan (CARB, 2000) and recommendations from ARB staff, as reported in Appendix C2 of the Southern California International Gateway Project FEIR (LAHD, 2013c).

To determine the initial vertical dimension ($\sigma z0$) for a volume or line source, Table 3-2 of the AERMOD User's Guide (EPA, 2018a) recommends that the vertical dimension of the source be divided by 2.15 for a surface-based source or elevated source on or adjacent to a building, or by 4.3 for an elevated source not on or adjacent to a building. The commenter contends that the $\sigma z0$ for a locomotive source should equal the "…release height, divided by 4.3", which implies that the commenter considers a locomotive volume source to be an elevated source not on or adjacent to a building. However, the source descriptions in Table 3-2 of the AERMOD User's Guide leave room for interpretation. For example, one might consider a locomotive volume source to be a surface-based source since the locomotive is in contact with the ground. Or one might consider it to be an elevated source on or adjacent to a building, where the "building" is

the locomotive itself. In either of those two cases the denominator in the calculation of σz0 would be 2.15 rather than 4.3.

Moreover, the AERMOD User's Guide says the "vertical dimension of source", not the "release height", should be divided by 4.3. Professional judgment is required in estimating the "vertical dimension of the source". For example, one possible interpretation would be to assume that the "source" means the plume, and the vertical dimension of the source would be twice the release height since one would expect the plume to disperse roughly equal distances both below and above the plume centerline (i.e., the plume would spread from the plume centerline down to the ground, a distance equivalent to one release height, and simultaneously it would also spread upward from the plume centerline a similar distance equivalent to one release height). Using this interpretation would result in $\sigma z0 = 2 \times \text{Release Height} \div 4.3$, which is equivalent to $\sigma z0 = \text{Release Height} \div 2.15$. Given the subjectivity involved in this determination, the Port deferred to regulatory agency precedent for locomotives. Therefore, as documented in the Roseville Rail Yard Study (CARB, 2004 p. 40) and Table 7 of the Diesel Particulate Matter Exposure Assessment Study for the Ports of Los Angeles and Long Beach (CARB, 2006), σz0 for locomotives was set equal to the release height divided by 2.15.

Response to Comment SCAQMD-26

The LAHD agrees with the District that the analysis of OGV peak-day emissions related to MM AQ-9 that was presented in the Recirculated DSEIR was unclear. The analysis has been revised in the Final SEIR to present the peak-day emissions for OGVs at berth under the Revised Project scenario for years 2023-2045 without AMP usage, to reflect the difference in mitigation against the FEIR Mitigated scenario peak-day OGV emissions at-berth, which are assumed to use AMP. This would result in an increase in peak daily emissions of years 2023-2045 for the Revised Project, which have been updated in Tables 3.1-9 and 3.1-11 (see Section 3.2.3.1 of the FSEIR). Peak daily emissions in the Recirculated DSEIR for years 2008-2018 did not require updating; the annual emissions in the Recirculated DSEIR reflected the difference in mitigations between the FEIR Mitigated and Revised Project. Please note that these Final SEIR revisions only affect 24-hour and hourly emissions for years 2023-2045 of the Revised Project. The increase in emissions due to these revisions does not change the impact findings for operational emissions (Impact AQ-3) as shown in Table 3.1-9.

In view of an increase in peak daily emissions for years 2023-2045 under the Revised Project, their effect on criteria pollutant concentrations was evaluated to confirm if findings for Impact AQ-4 would change in the Final SEIR. Remodeling analysis found the 24-hr $PM_{2.5}$ concentration increment, as well as other pollutant concentrations for years 2023-2045 evaluated in AQ-4, to have a negligible increase related to the updates, and therefore no additional impacts were found for the Revised Project in the Final SEIR. Because there are no additional impacts, additional mitigation, even if it were available, would not be required.

Response to Comment SCAQMD-27

The LAHD disagrees with the suggestion of updating the assumed percent of drayage truck trips fueled with LNG in the SEIR's air quality analysis from 2014's average (8.2%) to 0%. There is evidence from past years' Port activity (LAHD, 2015 p. 52) that a small percentage of the fleet coming to the CS Terminal is LNG-fueled, so there is no basis to assume it would be zero in the future. The LAHD expects that the percentage of drayage trucks in the Port's fleet using non-diesel technologies (including LNG) will

increase once that technology becomes commercially and operationally feasible and through the support of the port-wide strategies in the CAAP. The SEIR, however, cannot take credit for potential increases in the number of LNG trucks in the Port-wide fleet and there are no feasible terminal-specific measures to transform the drayage fleet, as explained in Response to Comment SCAQMD-11.

Response to Comment SCAQMD-28

The LAHD disagrees with the statement that the 2016 AQMP did not take the Revised Project into account. As the Recirculated DSEIR states (p. 3.1-79), "LAHD regularly provides SCAG with its Port-wide cargo forecasts for development of the AQMP. Therefore, the attainment demonstrations included in each AQMP account for the emissions generated by projected future growth at the Port. Because the forecasted throughput of the Revised Project is included in the Port-wide projections provided to SCAG (SCAG, pers. comm. 2018), the Revised Project cargo forecast and related emissions are included in the General Conformity budgets established in the Final 2016 AQMP (SCAQMD, 2017). The Revised Project would be considered consistent with the local AQMP and not interfere with attainment goals given that the Revised Project's activities (e.g. cargo throughput, ship berths) are consistent with the projections utilized in the formulation of the AQMP." The analysis also concludes that the Revised Project's compliance with the applicable SCAQMD mobile-source rules would ensure that it would not obstruct implementation of the AQMP.

Furthermore, it is important to note that the AQMP is not based upon mitigation commitments from specific projects analyzed under CEQA, and in fact neither the CS Terminal nor the Approved Project is referenced anywhere in the 2016 AQMP. Rather, the 2016 AQMP emissions inventory is based on CARB regulatory models and databases using existing fleet information; technologies based on the current fleet and the future effects on that fleet of adopted rules and regulations; and regional and sub-regional growth forecasts, including growth at the ports. Appendix III of the 2016 AQMP describes the emission inventories and the development process for mobile sources, including trucks, ships, cargo handling equipment and other port-related sources. Appendix III indicates that new engines and equipment are cleaner in the future as a result of adopted rules and regulations, and that normal fleet turnover reduces on- and off-road mobile NOx emissions and tailpipe diesel PM_{10}/$PM_{2.5}$ monotonically from 2012 through 2031.

There is no indication that advanced-technology project mitigation commitments are included in the projected AQMP baseline inventories. For example, near-zero- and zero-emission trucks (other than certain refuse trucks) are not included in the base year or future baseline inventories. To the extent that 2016 AQMP control measures affect port-related sources, they would also affect the sources at the CS Terminal, regardless of project mitigation measures. Thus, the 2016 AQMP does not rely upon emission reductions from those mitigation measures, and those measures do not affect the 2016 AQMP control strategy. No further analysis related to AQMP consistency beyond that already provided in the Recirculated DSEIR is necessary.

CEQA does not require that a supplemental EIR for proposed changes to a previously approved project assess mitigation to reduce or avoid impacts of the project that occurred prior to approval of the proposed change. Nevertheless, for informational purposes only, the Recirculated DSEIR does disclose emissions that occurred between 2008 and the present due to incomplete implementation of mitigation from the 2008 EIS/EIR (see

Table 3.1-11.) See also Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures.

Response to Comment SCAQMD-29

Please see Master Response 2: Zero- and Near-Zero-Emission Technologies and Response to Comment SCAQMD-11. This comment appears to be a compilation of ongoing pilot and demonstration projects and concept development efforts related to zero-emission truck technologies, none of which appears to be nearing completion. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

2.3.2.3 City of Los Angeles Bureau of Sanitation

FORM GEN. 160 (Rev. 8-12)

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

CITY OF LOS ANGELES
OCT 26 2018
ENV MGMT DIV
HARBOR DEPARTMENT

DATE: October 22, 2018

TO: Christopher Cannon, Director of Environmental Management
Los Angeles Harbor Department

FROM: Ali Poosti, Division Manager
Wastewater Engineering Services Division
LA Sanitation and Environment

SUBJECT: **BERTHS 97-109 [CHINA SHIPPING] CONTAINER TERMINAL PROJECT - NOTICE OF AVAILABILITY OF A RECIRCULATED DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT**

BOS.1-1 This is in response to your October 2, 2018 Notice of Availability of a Recirculated Draft Supplemental Environmental Impact Report for the proposed Improvement project located at Berths 97-109 at the Port of Los Angeles, San Pedro, CA 90731. LA Sanitation, Wastewater Engineering Services Division has received and logged the notification. Upon review, it has been determined that the project is unrelated to sewers and does not require any hydraulic analysis. Please notify our office in the instance additional environmental review is necessary for this project.

If you have any questions, please call Christopher DeMonbrun at (323) 342-1567 or email at chris.demonbrun@lacity.org

CD/AP:sa

c: Kosta Kaporis, LASAN
Cyrous Gilani, LASAN
Christopher DeMonbrun, LASAN

File Location: CEQA Review\FINAL CEQA Response LTRs\FINAL DRAFT\Berth 97-109 [China Shipping] Container Terminal Project - NOA of a Recirculated dsEIR.doc

FORM GEN. 160 (Rev 8-12)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

CITY OF LOS ANGELES
NOV 27 2018
ENV MGMT DIV
HARBOR DEPARTMENT

DATE: November 19, 2018

TO: Christopher Cannon, Director of Environmental Management
Los Angeles Harbor Department

FROM: Ali Poosti, Division Manager
Wastewater Engineering Services Division
LA Sanitation and Environment

SUBJECT: **BERTHS 97-109 [CHINA SHIPPING] CONTAINER TERMINAL PROJECT - REVIEW PERIOD NOTICE OF RECIRCULATED DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT**

BOS.2-1

This is in response to your October 11, 2018 Review Period Notice of Recirculated Draft Supplemental Environmental Impact Report for the proposed improvement project located at Berths 97-109 at the Port of Los Angeles, San Pedro, CA 90731. LA Sanitation, Wastewater Engineering Services Division has received and logged the notification. Upon review, there were no changes to the project and the previous response is valid. Please notify our office in the instance that additional environmental review is necessary for this project.

If you have any questions, please call Christopher DeMonbrun at (323) 342-1567 or email at chris.demonbrun@lacity.org

CD/AP: mg

c: Kosta Kaporis, LASAN
Cyrous Gilani, LASAN
Christopher DeMonbrun, LASAN

File Location: CEQA Review\FINAL CEQA Response LTRs\FINAL DRAFT\Berth 97-109 [China Shipping] Container Terminal Project - Review Period Notice of Recirculated dsEIR.doc

Response to Comment BOS.1-1 and BOS.2-1

The Bureau's determination that the Revised Project is unrelated to its jurisdiction is noted. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

2.3.2.4 Citizens for a Safe Environment

Coalition For A Safe Environment

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November 16, 2018

City of Los Angeles Harbor Department
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NOTE: The attachment "Commercial Status..." is CFASE 23 and the "Wilmington Container..." is CFASE 24.

Re: Recirculated Draft Supplemental Environmental Impact Report (DSEIR)
Berths 97-109 China Shipping Container Terminal Project 2018
SCH No. 2003061153, APP No. 150224-504

Su: Submission of Public Comments Regarding The Recirculated Draft Supplemental Environmental Impact Report (RDSEIR) Berths 97-109 China Shipping Container Terminal Project

The Coalition For A Safe Environment (CFASE) and et all undersigned organizations and individuals wish to submit the following public comments on the Recirculated Draft Supplemental Environmental Impact Report (RDSEIR) Berths 97-109 China Shipping Container Terminal Project

1. **POLA must have a signed contract with a shipping company operator of the China Shipping Terminal.**

CFASE-1

The Port of Los Angeles must immediately cease operation of the China Shipping Terminal for failure to have a signed long term lease agreement. A month-to-month lease or MOU is not acceptable for compliance with CEQA requirements for assurance of completion of adopted Mitigation Measures.

2. **The RDSEIR fails to include a Zero Emissions Heavy-Duty Truck Mitigation Measure**

CFASE-2

The RDSEIR fails to include a Zero Emissions Heavy-Duty Truck Mitigation Measure. There are currently available Zero Emission Class 8 Drayage Trucks that can service all short-haul requirements of less 100 miles. Long-haul trucks will be available in 2019. A Mitigation Measure should include immediate ZE Heavy Duty Short-Haul Truck Phase-In Plan for less than 100 miles beginning in 2019 and ending in 2024 and a Long-Haul Truck Phase-In Plan for more than 100 miles beginning in 2020 and ending in 2025. See Attachment.

CFASE-2

The POLA has provided no current 2018 information, evidence or research that justifies the non-availability or non-performance of Zero Emission Heavy Duty Drayage Trucks for Mitigation Measures and our proposed schedule. The non-availability of funds for new purchases is the fault of the POLA for its failure to adequately budget for mitigation expenses, schedule the phase-in of new technologies and to charge appropriate container tariffs.

MM-AQ 20 has been removed and should be replaced with our recommended Mitigation Measure and schedule.

3. The RDSEIR Discloses That There Will Be An Increase of 296,794 TEU's Above The 2014 Baseline With No Additional Mitigation

CFASE-3

This will result in a 77% increase of TEU's being handled by on-dock rail with no rail Locomotive Mitigation Measure being proposed or Cumulative Impact Mitigation Measures for increased impacts to the Environment, Public Health, Environmental Justice Communities and Disadvantaged Communities. This will be in violation of CEQA requirements, AB 32 and AB617 for the mandatory reduction of all categories of stationary and mobile air pollution sources, greenhouse gases and improvement of public health.

4. The Conclusion That There are no Additional Feasible Mitigation For AQ-3, AQ-4, AQ-7 and GHG-1 is Unacceptable.

CFASE-4

The Coalition For A Safe Environment has conducted a Commercial Status Availability Of Zero Emission Trucks, Cargo Handling Equipment Construction Equipment, Specialty Vehicles & Buses Survey which identifies numerous available, feasible technology mitigation which can be incorporated into the SEIR. See Attachment.

5. Mitigation Measure MM AQ-9 is not acceptable for the following reasons:

CFASE-5

a. The Mitigation Measure must apply to China Shipping and any other shipping company which is authorized to currently use, plan to use or approved to use the China Shipping Terminal.
b. The Mitigation Measure must mandate that the Port of Los Angeles and China Shipping Terminal Administration be notified by a shipping company a minimum of 30 days in advance of its intent to use China Shipping Terminal and whether the ship is AMP Capable.
c. The RDSEIR failed to disclose that the China Shipping Terminal currently has the shore-power capability of 100% compliance rate by 2019.
d. If the ship vessel is not AMP Capable, An AMP-Capable Berth is Unavailable, An AMP-Capable Ship is Not Able to Plug-In or there is an Emergency the China Shipping Terminal must use an equivalent alternative at-berth emission control capture and treatment system. At this time only one company technology has been certified by the California Air Resources Board that can service all container ships which is the Advanced Environmental Group – AMECS: Advanced Maritime Emissions Control System. This is a 100% feasible and available technology contrary to your conclusion. An order can be placed and delivery within 6-12 months. See attachment.
e. If the China Shipping Terminal or POLA does not have an AMECS or equivalent technology available it shall pay a $ 100 per container tariff. 50% will go towards a fund to purchase additional AMECS or equivalent systems technology and 50% will go to the Harbor Community Benefit Foundation to mitigate all off-port community environmental impacts.

CFASE-5

f. If a ship is not a Container Ship but using the China Shipping Terminal it/POLA shall pay a $ 1.00 per metric ton of cargo tariff. 50% will go towards the POLA Harbor Enforcement Program and 50% will go to the Harbor Community Benefit Foundation to mitigate all off-port community environmental impacts.

CFASE-6

g. It is a fact the AMECS Technology is more efficient in capturing and treating more ship emissions and more cost effective than the POLA's AMP Technology.

CFASE-7

h. The Mitigation Measure must also require the POLA to publish a quarterly Compliance Report.

6. Mitigation Measure MM AQ-10 is not acceptable for the following reasons:

CFASE-8

a. The RDSEIR failed to disclose that the China Shipping Terminal achieved a 99% VSRP Participation Rate in 2014 according to POLA data and the goal should now be 100% participation.

CFASE-9

b. Does not contain any penalty for failure to comply with the VSRP.

c. If a Container Ship does not comply with the VSRP available it shall pay a $ 100 per container tariff. 50% will go towards the POLA Harbor Enforcement Program and 50% will go to the Harbor Community Benefit Foundation to mitigate all off-port community environmental impacts.

d. If a ship is not a Container Ship but using the China Shipping Terminal and does not comply with the VSRP available it/POLA shall pay a $ 1.00 per metric ton of cargo tariff. 50% will go towards the POLA Harbor Enforcement Program and 50% will go to the Harbor Community Benefit Foundation to mitigate all off-port community environmental impacts.

e. The Mitigation Measure must also require the POLA to publish a quarterly Compliance Report.

7. Mitigation Measure MM AQ-15 is not acceptable for the following reasons:

CFASE-10

a. There are Near Zero Emission Yard Tractors currently available that exceed Tier 4 Final Off-Road Engine standards. These include LPG, CNG and RNG. See CFASE Attachment.

b. There are Zero Emission Yard Tractors currently available that can meet all short haul requirements requirement by 2019. See CFASE Attachment.

CFASE-11

f. There is no penalty for the failure to comply with any schedule. If the China Shipping Terminal/POLA fails to comply it shall pay a $ 100 per container lift tariff. 50% will go towards a POLA fund for new Yard Tractor purchases and 50% will go to the Harbor Community Benefit Foundation to mitigate all off-port community environmental impacts.

CFASE-10

g. The POLA has provided no current 2018 information, evidence or research that justifies the non-availability or non-performance of Zero Emission or Near Emission Yard Tractor Technologies for mitigation and our proposed date. The non-availability of funds for new purchases is the fault of the POLA for its failure to adequately budget for mitigation expenses, schedule the phase-in of new technologies and to charge appropriate container tariffs.

8. Mitigation Measure MM AQ-16 and Mitigation Measure MM AQ-17 is not acceptable for the following reasons:

CFASE-12

a. There are Near Zero Emission Cargo Handling Equipment (CHE) currently available that exceed Tier 4 Final Off-Road Engine standards that can meet all requirements requirement by 2019. These include LPG, CNG and RNG. See CFASE Attachment.

CFASE-12

b. There are Zero Emission Cargo Handling Equipment (CHE) currently available that can meet all requirements requirement by 2019. See CFASE Attachment.
c. There are Zero Emission Yard Tractors currently available that can meet all port and railyard requirements by 2019. See CFASE Attachment.

CFASE-13

h. There is no penalty for the failure to comply with any schedule. If the China Shipping Terminal/POLA fails to comply it shall pay a $ 100 per container lift tariff. 50% will go towards a POLA fund for new CHE purchases and 50% will go to the Harbor Community Benefit Foundation to mitigate all environmental impacts.
i. There is no penalty for the failure to comply with any schedule. If the China Shipping Terminal/POLA fails to comply it shall pay a $ 1.00 per metric ton of cargo lift tariff. 50% will go towards the POLA Harbor Enforcement Program and 50% will go to the Harbor Community Benefit Foundation to mitigate all off-port community environmental impacts.

CFASE-12

j. The POLA has provided no current 2018 information, evidence or research that justifies the non-availability or non-performance of Zero Emission or Near Zero Emission CHE Technologies for mitigation and our prosed date. The non-availability of funds for new purchases is the fault of the POLA for its failure to adequately budget for mitigation expenses, schedule the phase-in of new technologies and to charge appropriate container tariffs.

9. Mitigation Measure LM GHG-1: GHG Credit Fund is Unacceptable

a. As an Environmental Justice Organization which represents EJ Communities in the San Pedro Bay we under no circumstances will accept this mitigation measure of allowing the purchase of credits from CARB or any other GHG Offset Registry. The POLA has failed to conduct an adequate survey of all current available, feasible and cost-effective, CARB Certified/ South Coast AQMD BACT:

- Zero Emission Technologies
- Near Zero Emissions Technologies
- Emission Capture Technologies
- Emission Capture & Treatment Technologies

CFASE-14

b. The POLA has provided no current 2018 information, evidence or research that justifies the non-availability or non-performance of Zero Emission, Near Zero Emission, Emissions Capture Technologies, Emissions Capture & Treatment Technologies that can be included as part of the China Shipping Terminal Project or Mitigation.
c. We disagree with the limitations of funds being used only on Port of Los Angeles property when it is a fact that a significant amount of GHGs are generated by the Port, Port Tenants and Tenant Service Providers Off-Port Property which will also cause significant direct and indirect negative community environmental, public health, public safety, community sustainability and socio-economic impacts.
d. GHG Mitigation Funds can be given to the Harbor Community Benefit Foundation to sponsor projects that would reduce GHG environmental and public impacts off-port property.
e. The proposed amount of $ 250,000 is inadequate to mitigate the GHG Environmental and Public Health Impacts. We request a study be completed to determine the costs and Mitigation Measures to address GHG Environmental and Public Health Impacts.

CFASE-15

10. Mitigation Measure LM AQ-1: Cleanest Available Cargo Handling Equipment is Unacceptable

CFASE-15

a. There are Zero Emission and Near Zero Emission Cargo Handling Equipment (CHE) currently available that can meet all requirements requirement by 2019. See CFASE Attachment.
b. There are Zero Emission and Near Zero Emission Yard Tractors currently available that can meet all port and railyard requirements by 2019. See CFASE Attachment.
c. We request that POLA and Tenant create, maintain and update quarterly a Survey of Zero Emissions and Near Zero Emissions Handling Equipment.
d. We have no confidence in the LAHD and Tenant conducting adequate feasibility assessments when they have ignored past public comments identifying Zero Emission, Emission Capture & Control Technologies and BACT and denied currently available, feasible and CARB certified technologies.

CFASE-16

11. Mitigation Measure LM AQ-2: Priority Access System Is Acceptable

12. Mitigation Measure LM AQ-3: Zero Emissions Equipment Demonstration And Feasibility Assessment is Not Acceptable

CFASE-17

a. There are numerous categories of CHE and we request that that when available Tenant shall conduct a minimum of three zero emission demonstrations of each category of CHE.
b. We request that beginning in 2019 all available ZE CHE be identified annually.
c. We request that beginning in 2019 all ZE CHE that has passed all demonstration/test requirements and/or certified by CARB be published annually.
a. The proposed goal of 2030 is not acceptable. CFASE proposes our CAAP Freight System & Technologies recommended transition schedule:

25% by 2020 50% by 2023 100% by 2025

13. SDEIR fails to identify, assess and mitigate all truck, container and chassis negative impacts from Truck, Container & Chassis Points of Origin to all Port and Tenant destinations.

CFASE-18

We disagree to POLAs determination that Air Quality Impacts are Less Than Significant because the POLA has not identified and has significantly underestimated air emissions and greenhouse gases from Port and Tenant Freight Transportation Destinations.

These negative impacts include but are not limited to: increased traffic congestion, increased air pollution, increased greenhouse gasses, increased noise, increased ground and street contamination, diversion of city services when there are truck accidents, increased public infrastructure damage, increased public health and safety impacts. These origins and destinations include as a minimum:

- Truck Points of Origin. Throughout Los Angeles, Orange County, Inland Empire etc.
- On/Off Tidelands Property Truck Container/Flat Bed Inspection Facilities.
- On/Off Tidelands Property Container Storage Yards, Maintenance & Repair Facilities.
- On/Off Tidelands Property Container/Flat Bed Chassis Storage Yards, Maintenance & Repair Facilities.
- On/Off Tidelands Property Chassis 40’ to 53’ Modification, Cutting, Welding & Painting Facilities
- On/Off Tidelands Property TRU/Genset Storage Yards, Maintenance & Repair Facilities.
- On/Off Tidelands Property Truck Storage Yards, Staging, Maintenance & Repair Facilities.
- On/Off Tidelands Property Yard Tractor Storage Yards, Maintenance & Repair Facilities.

CFASE-18

- On/Off Tidelands Property Container Fumigation Facilities.
- On/Off Tidelands Property Container Transloading Facilities.
- On/Off Tidelands Property Truck Fueling Facilities: Diesel, Natural CNG, LNG, Hydrogen.
- On/Off Tidelands Property Truck Yard Tractor Fueling Facilities: Diesel, Natural CNG, LNG, Hydrogen.
- On/Off Tidelands Property Truck Electrical Charging Stations.
- On/Off Tidelands Property Truck Yard Tractor Fueling Facilities.
- On/Off Tidelands Property Peel-Off Yards.

CFASE has conducted a survey of Container Storage Yards in Wilmington and has identified 117 locations. See CFASE Attachments.

14. SDEIR fails to identify, assess and mitigate all Cumulative Impacts.

The Cumulative Impacts have also been significantly underestimated because the POLA failed to include the following in the Cumulative Impact Assessment:

a. Freight Transportation:

CFASE-19

- Truck Points of Origin. Throughout Los Angeles and Orange Counties.
- On/Off Tidelands Property Truck Container/Flat Bed Inspection Facilities.
- On/Off Tidelands Property Container Storage Yards, Maintenance & Repair Facilities.
- On/Off Tidelands Property Container/Flat Bed Chassis Storage Yards, Maintenance & Repair Facilities.
- On/Off Tidelands Property Chassis 40' to 53' Modification, Cutting, Welding & Painting Facilities
- On/Off Tidelands Property TRU/Genset Storage Yards, Maintenance & Repair Facilities.
- On/Off Tidelands Property Truck Storage Yards, Staging, Maintenance & Repair Facilities.
- On/Off Tidelands Property Yard Tractor Storage Yards, Maintenance & Repair Facilities.
- On/Off Tidelands Property Container Fumigation Facilities.
- On/Off Tidelands Property Container Transloading Facilities.
- On/Off Tidelands Property Truck Fueling Facilities: Diesel, Natural CNG, LNG, Hydrogen.
- On/Off Tidelands Property Truck Yard Tractor Fueling Facilities: Diesel, Natural CNG, LNG, Hydrogen.
- On/Off Tidelands Property Truck Electrical Charging Stations.
- On/Off Tidelands Property Truck Yard Tractor Fueling Facilities.
- On/Off Tidelands Property Peel-Off Yards.
- New POLA projects such as the Everport Terminal Expansion Project.

CFASE has conducted a survey of Container Storage Yards in Wilmington and has identified 117 locations. See CFASE Attachments.

CFASE-19

The Harbor Community Benefit Foundation also completed a Harbor Community Off-Port Land Use Study which also conformed the number of Container Storage Yards in Wilmington and other significant Off-Port Land Use impacts to Harbor Communities.

https://harborcommunitybenefitfound1.app.box.com/s/1f5nlt2mz6mia9w5bpeejyjy0nlwzut3

We request that the Final RSEIR review these documents and establish appropriate Mitigation Measures to reduce and eliminate Environmental and Public Health Impacts.

b. Port of Los Angeles & Port of Long Beach Projects:

Port of Los Angeles

1. Berth 164 Valero Marine Oil Terminal Wharf Improvements Project (MOTEMS)
2. Berth 167-168 Shell Marine Oil Terminal Wharf Improvements Project (MOTEMS)
3. Berths 187-190 Vopak Terminals Wharf Improvements Project (MOTEMS)
4. Berths 118-120 Kinder Morgan Wharf Improvements Project (MOTEMS)
5. Berths 148-151 Phillips 66 Wharf Improvements Project (MOTEMS)
6. Berth NuStar Energy LP Wharf Improvements Project (MOTEMS)
7. Berths 238-240C PBF Energy Wharf Improvements Project (MOTEMS)
8. POLA/Caltrans SR 47 Improvement Project
9. Berths 195-200A WWL Vehicle Services Americas
10. Harbor Boulevard Roadway Improvements Project
11. Removal of Underground Storage Tanks at Cabrillo Marina
12. Marine Research Center Project
13. Wilmington Marina Parkway
14. Berths 177-178 Transit She Demolition Project
15. SA Recycling Crane Replacement & Electrification Project
16. Avalon Freight Services Relocation Project
17. U.S. Navy Commission Building Demolition Project
18. Reeves Avenue Marine Services Support Yard
19. John S. Gibson Blvd. Port Development Truck Parking Center
20. Harbor Performance Enhancement Center
21. Draft Amendment To the Port of Los Angeles Master Plan-Maritime Support Services 2017

Port of Long Beach

1. Pier F Berth F209-Chemical Marine Terminal (MOTEMS)
2. Pier B BerthsB82, B83-Petro-Diamond (MOTEMS)
3. Pier B Berths B76-B80, B84-B87-Tesoro Logistics -Operations LLS (MOTEMS)
4. Pier T Berth T121-Tesoro Logistics Operations LLS (MOTEMS)
5. Pier S Berth S101-Volpak Terminal Long Beach Inc (MOTEMS)
6. Southern California Edison Transmission Lines Replacement.
7. PCMC Chassis Support Facility Project.
8. Mitsubishi Cement Facility Project.
9. Baker Cold Storage Facility Project.
10. Eagle Rock Aggregate Terminal Project.
11. Sulex, Inc. Negative Declaration/Application Summary Report.
12. On-Dock Rail Support Facility Project

CFASE-19 ↑ 13. Fireboat Station 20

15. The SDEIR fails to include an assessment of Alternative Electric Rail Transportation Technologies

Zero Emission Electric Trains such as Maglev Technologies are faster, more efficient and can significantly increase throughput. American MagLev Technologies, Inc. has proposed to the Port of Los Angeles, Port of Long Beach, South Coast AQMD and the Southern California Association of Governments a feasible container transport Maglev Train System.

CFASE-20 EMMI Logistics Solutions and American MagLev Technology have designed a state-of-the-art goods movement transportation system that can transport up to 8,000 containers a day and more than 3 times the speed of traditional diesel locomotives. This technology also does not require 1-2 days to accumulate 250-300 train cars before it can travel to its destinations.

The Coalition For A Safe Environment has researched and published a comprehensive technology survey of Zero Emissions Technologies which includes Zero Emission Electric Train Technologies. See Attachment.

16. Air Quality & Meteorology Unavoidable Significant Impacts Determination

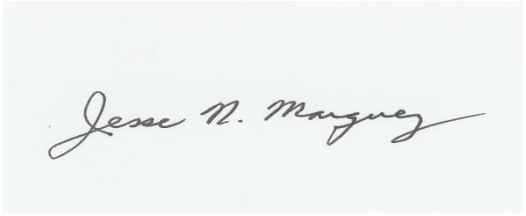
We disagree with your determination because there are numerous feasible technologies that can reduce air quality significant impacts that you are not including in the project or as proposed Mitigation Measures. These include Zero Emission Technologies, Near Zero Emission Technologies, Best Available Control Technologies (BACT), Best Available Retrofit Technologies (BART) and Emission Capture Technologies. All referenced technologies are commercially CFASE-21 available today and can be ordered with delivery within one year depending on the quantity ordered.

The Coalition For A Safe Environment has researched and published a comprehensive technology survey of all categories of Zero Emissions Technologies which can be used at the China Shipping Terminal, at the Port of Los Angeles and off-port. See Attachment.

17. Green House Gas Emissions Unavoidable Significant Impacts Determination

We disagree with your determination because there are numerous feasible technologies that can reduce Greenhouse Gases significant impacts that you are not including in the project or as CFASE-22 proposed Mitigation Measures. These include Zero Emission Technologies, Near Zero Emission Technologies, Best Available Control Technologies (BACT) and Emission Capture Technologies. All referenced technologies are commercially available today and can be ordered with delivery within one year depending on the quantity ordered.

Respectfully Submitted,



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Coalition For A Safe Environment

Zero Emission Transportation Vehicles, Cargo Handling Equipment & Construction Equipment Commercial Availability Survey

11.16.2018

Attachment "Commercial Status..." is Comment CFASE-23

Electric Trucks Class 8

1. BYD Motors - 8TT Battery-Electric Truck
2. BYD Motors - T9 Battery-Electric Truck
3. Kenworth - ZECT-Zero Emissions Cargo Transit T680 Hydrogen Fuel Cell
4. Nikola - Nikola One
5. Toyota - Electric Class 8 Truck - Hydrogen Fuel Cell
6. TransPower - ElecTruck
7. US Hybrid - Electric Class 8 Truck - eTruck
8. US Hybrid - Electric Class 8 Truck - H2Truck

Electric Yard Tractors Class 8

1. BYD Motors - 8TT Battery Electric Tractor *
2. BYD Motors - 8Y Tractor
3. BYD Motors - Q1M Battery Electric Tractor
4. Hoist Liftruck - TE Series Electric-Powered Terminal Tractor
5. Kalmar Ottawa - T2E Electric Terminal Tractor
6. Orange EV - T-Series 4x2 Terminal Truck
7. Orange EV - T-Series 4x2 Terminal Truck Conversion of Kalmar Ottawa Truck
8. Orange EV - T-Series Reman (Conversion/Repower)
9. Terberg - YT202EV
10. Transpower – Elec Truck Yard Tractor

Electric Trucks Class 6

1. BYD Motors - T7 Battery Electric Truck

Electric Trucks Class 5

1. BYD Motors - 5F/T5 Battery-Electric Box Truck
2. ADOMANI - Class 5 Truck Cab & Chassis

Electric Trucks Class 4

1. ADOMANI - Class 4 Truck

Electric Trucks Class 3

1. ADOMANI - Class 3 Truck

Electric Pickup Trucks

1. Havelaar Canada - Bison Electric Pickup Truck

2. Workhorse Group - W15 All Wheel Drive Electric Truck

Electric Ship-to-Shore (STS) Rail-Mounted Gantry Cranes

1. Konecranes Electric Ship-to-Shore (STS) Gantry Cranes
2. Liebherr Rail Mounted Electric Gantry Crane
3. Shanghai Zhenua Heavy Industries Co. Electric Ship-to-Shore Cranes

Electric Rubber-Tired Gantry (RTG) Cranes

1. ANUPAM-MHI - E-RTG Electric Rubber Tired Gantry Crane
2. Konecranes - Electric Cable Reel Rubber-Tired Gantry (RTG) Cranes
3. Konecranes - Electric Busbar Rubber-Tired Gantry (RTG) Cranes
4. Kalmar - E-One2 Zero Emission RTG
5. Liebherr Container Cranes - e-RTG
6. Terex Port Solutions - E-RTGs

Electric Rail-Mounted Gantry Cranes

1. HY Crane Co. Electric RMG Rail Mounted Container Gantry Crane

Reach Stackers

1. Transpower - Electric Forklift Reach Stacker
2. Konecranes Hybrid Reach Stacker

Shuttle Carrier

1. Kalmar Electric Shuttle Carrier

Straddle Carrier
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1. Konecranes Electric Straddle Carrier DE53
2. Konecranes Electric Straddle Carrier DE54
3. Konecranes Electric Boxrunner
4. Kalmar ESC440 Electric Straddle Carrier

Trailer Spreader

1. TEC Electric Trailer Spreader BA-030

Electric Forklifts

1. Bendi - Electric Narrow Aisle B-30
2. Bendi - Electric Narrow Aisle B-40
3. BYD Motors - ECB 16 Electric Forklift
4. BYD Motors - ECB 18 Electric Forklift
5. BYD Motors - ECB 20 Electric Forklift
6. BYD Motors - ECB 25 Electric Forklift
7. BYD Motors - ECB 27 Electric Forklift
8. BYD Motors - ECB 30 Electric Forklift
9. BYD Motors - ECB 35 Electric Forklift
10. CAT - EP16-20(C)N Electric Forklifts
11. CAT - EP10-15KRT PASC Electric Forklifts
12. CAT - EP10-16-20(C)PNT Electric Forklifts

13. Clark - GEX 40/45/50 Series Electric Forklifts
14. Clark - GEX ECX 20/25/30/32 Series Electric Forklifts
15. Clark - GEX 20/25/30 Series Electric Forklifts
16. Clark - GEX 16/18/20S Series Electric Forklifts
17. Clark - GTX 16/18/20S Series Electric Forklifts
18. Clark - TMX 12/15S/15/17/20/25 Series Electric Forklifts
19. Clark - ESX 12/15S/15/17/20/25 Series Electric Forklifts
20. Crown - RC 5500 Series Stand Up 3-Wheeled Electric Forklift
21. Crown - SC 5200 Series 3-Wheeled Electric Forklift
22. Crown - FC 4500 Series Four Wheeled Electric Forklift
23. Doosan - B40/45/50X-5 Series Electric 4-Wheel Forklift
24. Doosan - B22/25/30/35X-5 Series Electric 4-Wheel Forklift
25. Doosan - B20/25/25SE-7/30/32S-7 Series Electric 4-Wheel Cushion Forklift
26. Doosan - B15/18S/20SC-5 Series Electric 4-Wheel Cushion Forklift
27. Doosan - B15T/18TL/20T/20TL Electric 7 Series 3-Wheel Forklift
28. Doosan - B16/18/20X-7 Electric 7 Series 4-Wheel Forklift
29. Doosan - B13/15/16R-5 Series Rear Drive 3-Wheeled Forklift
30. Drexel - Electric Narrow Aisle SLT 30
31. Drexel - Electric Narrow Aisle SL-40
32. Hangcha - A Series 3 Wheeled Forklift
33. Hangcha - J Series 3 Wheeled Forklift
34. Hangcha - A Series 4 Wheeled Forklift
35. Hangcha - J Series 4 Wheeled Forklift
36. Hoist Liftruck - PE Series Heavy-Duty Pneumatic Lift Trucks
37. Hoist Liftruck - Lazer Series Cushion Tire Lift Truck
38. Hoist Liftruck - Neptune Electric Series Lift Truck
39. Hyster - E30-40XN Series Electric Lift 4 Wheel Truck
40. Hyster - J45-70XN Series Electric Pneumatic Tire
41. Hyster - J80-100XN Series Electric Pneumatic Tire
42. Hyster - Class 1 With Nuvera Hydrogen Fuel Cell
43. Hyster - Class 2 With Nuvera Hydrogen Fuel Cell
44. Hyster - Class 3 With Nuvera Hydrogen Fuel Cell
45. Hyundai Construction - Series 9 40B-9 Four Wheeled Forklift
46. Hyundai Construction - Series 9 45B-9 Four Wheeled Forklift
47. Hyundai Construction - Series 9 50B-9 Four Wheeled Forklift
48. Kalmar - EC50-90
49. Komatsu - FB10-FB18 Series Electric Forklifts
50. Komatsu - FB20 A Electric Forklift
51. Komatsu - FB15M-FB20M Series Electric Forklifts
52. Komatsu - FB25-FB30 Series Electric Forklifts
53. Komatsu - FB13RL-FB18RL Series Electric Forklifts
54. Konecranes - TX AC Electric Rider Lift Trucks
55. Konecranes - SRX AC Electric Reach Trucks
56. Mariotti - Electric AC
57. Raymond Corp. - 4150 Stand Up Forklift
58. Raymond Corp. - 4250 Stand Up Forklift
59. Raymond Corp. - 4460 Sit Down Forklift
60. Raymond Corp. - 4750 Stand Up Forklift
61. Raymond Corp. - 7200 Reach-Fork Truck
62. Raymond Corp. - 7300 Reach-Fork Truck
63. Raymond Corp. - 7500 Universal Stance Reach Truck
64. Raymond Corp. - 7500 Dockstance reach Forklift

65. Raymond Corp. - 7000 Series Deep-Reach Forklift Truck
66. Raymond Corp. - 7700 Reach-Fork Truck
67. Raymond Corp. - 7310 4-Directional Reach Truck
68. Raymond Corp. - 9600 Sw8ing Reach Turret Truck
69. Raymond Corp. - 9700 Sing Reach Truck
70. Raymond Corp. - 9800 Swing Reach Truck
71. Raymond Corp. - TRT Transtacker Truck
72. Raymond Corp. - 9300 Sideloader Long Load Forklift
73. Raymond Corp. - 9400 Sideloader Forklift
74. Still - RX 50 1.0-1.6T Three-Wheeled Electric Forklift
75. Still - RX 20 1.4-2.0T Three-Wheeled Electric Forklift
76. Still - RX 20 1.4-2.0T Li-Ion Three-Wheeled Electric Forklift
77. Still - RX 60 1.6-2.0T Four Wheeled Electric Forklift
78. Still - RX 60 2.5-3.5T Four Wheeled Electric Forklift
79. Still - RX 60 3.5-5.0T Four Wheeled Electric Forklift
80. Still - RX 60 6.0-8.0T Four Wheeled Electric Forklift
81. Mitsubishi Forklift Trucks - FB16PNT-FB20PNT Series Three-Wheeled Electric
82. Mitsubishi Forklift Trucks - FBC15N-FBC18N Series Small Electric Cushion
83. Mitsubishi Forklift Trucks - FBC22N2-FBC30LN3 Series Mid-Size Electric Cushion
84. Mitsubishi Forklift Trucks - FBC15NS-FBC20NS Series Stand-Up End Control
85. Toyota - Core Electric Forklift
86. Toyota - Large Electric Forklift
87. Toyota - 3-Wheel Electric Forklift
88. Toyota - Stand-Up Rider Forklift
89. Toyota - Electric Pneumatic Forklift
90. Toyota - High-Capacity Electric Cushion Forklift
91. Yale - ESC 30 Three-Wheeled Forklift
92. Yale - ERC Four Wheeled Forklift
93. Yale - ERP30 Four Wheeled Forklift

Electric Pallet Truck

1. BYD - P20JW All-Electric Walkie Pallet Truck

Electric Dredger

1. Custom Dredge Works, Inc.
2. DSC Dredge
3. IMS Dredges
4. Ellicott Dredges. LLC
5. TV Dredging

Electric Tow Tractor

1. Clark - CTX 40/70 Series Electric Tow Tractor
2. Konecranes - TGX AC Electric Tow Tractor
3. Raymond - 8610 Tow Tractor

Tracked Dozer (Tractor)

1. Catepillar - D7E Hybrid Bulldozer

Excavators

1. Bobcat - E10 Electric Micro-Excavator
2. Kato - 9VXE- 3 Electric Mini Excavator
3. Kato - 17VXE Electric Mini Excavator

Top Front End Payloader

1. BYD Motors - Zero Emission Top Front Payloader

Skid Steer

1. Giant - E-Skid Steer Remote Control Skid-Steer Loader
2. Kovaco - eLise 900 Electric Skid Ster Loader
3. Schibeci - 32PE Electric Mini Skid Steer Loader
4. Sherpa - 100 ECO Electric Mini Skid-Steer

Wheeled Loader

1. Catepillar - 988K XE Electric Drive Wheel Loader
2. Hitachi - ZW220HYB-5 Hybrid Wheel Loader
3. John Deer - 944K Hybrid Wheel Loader
4. Kramer - KL25.5e Electric Wheeled Loader
5. Kramer - 5055e Electric Wheel Loader

Rope Shovels

1. Catepillar - Model 7295 Electric Rope Shovels
2. Catepillar - Model 7395 Electric Rope Shovels
3. Catepillar - Model 7495 HD Electric Rope Shovels

Dump Trucks

1. California Truck Equipment Co. - All-Eectric Powertrain With Ford E450 Dump Truck
2. California Truck Equipment Co. - All-Eectric Powertrain With Ford F59 Dump Truck

Delivery Truck

1. AMP - E-100 V.2 All-Electric Step Van With Workhorse Chassis
2. BYD Motors - T7 Battery Electric Delivery Truck - Class 7
3. BYD Motors - T5 Battery Electric Delivery Truck - Class 5
4. Mitsubishi Fuso Truck & Bus Corp. - Fuso eCanter Light Class 4 Delivery Truck
5. Mitsubishi Fuso Truck & Bus Corp./E-Fuso Vision One Heavy Duty Class 5 Delivery Truck
6. Motive Power Systems - All-Electric Powertrain For Ford E450 Box Truck/Flat Bed
7. Motive Power Systems - All-Electric Powertrain For Ford F59 Walk In Van
8. UPS - Hydrogen Fuel Cell Class 6 Delivery Truck

Cab Chassis Delivery Truck

1. ADOMANI - Class 3 All-Electric Cutaway
2. ADOMANI - Class 5 Truck Cab & Chassis
3. Motiv Power Systems - EPIC 4 Series
4. Motiv Power Systems - EPIC 5 Series
5. Motiv Power Systems - EPIC 6 Series
6. Zenith - Electric Chassis Cab
7. Zenith - Electric Cutaway Cab

Flat Bed Truck

1. Motive Power Systems - All-Electric Powertrain For Ford E450 Box Truck/Flat Bed
2. Phoenix Motorcars - ZEUS Electric Flatbed Ford E350
3. Phoenix Motorcars - ZEUS Electric Flatbed Ford E450

Cargo Panel Van

1. ADOMANI - All-Electric Logistic Van
2. Chanje Energy Inc. - Class 5 - V8070 Electric Panel Van
3. Chanje Energy Inc. - V8100 Electric Panel Van
4. Morgan Olson Route Star - Motiv All-Electric Powertrain Ford F59 Walk-In-Van
5. Rockport Commercial Vehicles Cargoport - Motiv All-Electric Powertrain
6. Zenith Motors - Electric Step/Walk-In Van

Cargo Van

1. Green4U Technologies - Cargo Van
2. Lighting Systems - Electric Transit Cargo Van
3. Merceds-Benz - eSprinter
4. VIA - Cargo Van
5. Volkswagon - I.D. Buzz Cargo Van
6. Workhorse - N-Gen Electric Cargo Van
7. Zenith Motors - Electric Cargo Van

Utility/Electric Trucks

1. California Truck Equipment Co. - Motiv All-Eectric Powertrain With Ford E450 Utility Truck
2. California Truck Equipment Co. - Motiv All-Eectric Powertrain With Ford F59 Utility Truck
3. Phoenix Motorcars - ZEUS Electric Utility Service Vehicle Ford E350/E450 *

Aerial Boom Truck

1. Altec - Aerial Boom Vehicle with JEMS: 16-20 kWh Lithium-Ion Battery *
2. Hyster - Ascender AWP
3. JLG - Aerial Lift
4. Yale - AEREO AWP

Electric Refuse Trucks

1. BYD/Wayne Engineering - Class 8 Electric Refuse Truck
2. Motiv Power - ERV Battery-Electric Class 8 Refuse Truck
3. Petebuilt - Model 520 Battery-Electric Class 8 Refuse Truck
4. Wrightspeed - Electric Powertrain Refuse Truck

Street Sweeper

1. Tropos - ABLE Sweep eCUV

Fire Trucks

1. Suzhou Eagle Electric Vehicle Manufacturing Co.
2. Citecareelectricvehilces.com - CitEcar Fire Buddy Deluxe

Compact Utility Vehicles

1. Alke - Electric Cargo Van
2. Columbia ParCar Corp. - Payloader/Welding
3. Columbia ParCar Corp. - Payloader/Van Body
4. Columbia ParCar Corp. - Payloader/Metal Cage
5. Columbia ParCar Corp. - Payloader/Folding Side Rails
6. Columbia ParCar Corp. - Payloader/Steel Cab
7. Columbia ParCar Corp. - Payloader/Refuse Unit
8. Columbia ParCar Corp. - Utility MVP
9. Columbia ParCar Corp. - Utilitruck
10. GEM - GEM e2
11. GEM - GEM e4
12. GEM - GEM e6
13. GEM - GEM eL XD
14. GEM - GEM eM 1400 LSV
15. Tropos Motors - ABLE FRV - Electric Fire Response Vehicle
16. Tropos Motors - ABLE EMSo - Electric Medical Service Vehicle, Open Platform
17. Tropos Motors - ABLE EMSc - Electric Medical Service Vehicle, Closed Platform
18. Tropos Motors - ABLE Trades
19. Tropos Motors - ABLE Pickup
20. Tropos Motors - ABLE Cargo

Passenger Trains

1. ALWEG Rapid Transit Company – Monorail Passenger Train
2. Altrom - Prima M4 - AZ4A Passenger Locomotives
3. Altrom - Citadis Dualis Tram-Train
4. Altrom – Ciutadis Spirit Light rail Vehicle
5. Altrom - Metropolis Metro
6. Altrom - Translohr Tramway On Tyres
7. Altrom - X'Trapolis Suburban Train
8. Bombardier Transportation
9. Bombardier - Innovia APM 100
10. Bombardier - Innovia APM 200 Automated People Mover System
11. Bombardier - Innovia APM 256
12. Bombadier - Innovia APM 300 Automated People Mover System
13. Bombardier - Innovia Monorail
14. Bombardier - Flexibility Trams
15. Bombardier - Flexibility 2 Trams
16. Bombardier - Flexibility Freedom
17. Bombardier - Flexibility Light Rail Vehicles
18. Bombardier - Single Deck Electric Multiple Units
19. Bombardier - Double-Deck Electric Multiple Units
20. BYD - Skyrail Monorail System
21. CAF - Electric Locomotive BB A 3000V
22. CAF - Electric Locomotive BBB A 3000V
23. CAF - Electric Locomotive C'C' 3.000V
24. CRRC Zhuzhou Locomotive Co. LTD - HX1D AC Rapid Electric Passenger Locomotive
25. CRRC Zhuzhou Locomotive Co. LTD - ERP Passenger
26. CRRC Zhuzhou Locomotive Co. LTD - Maglev Passenger Train
27. Hitachi - AT 100 Metro Dual Voltage
28. Hitachi - AT 200 Commuter Dual Voltage
29. Hitachi - AT 300 Intercity High Speed

30. Hitachi - Monorail Passenger Train
31. Hyundai Rotem - Manned Electric Passenger Trains
32. Hyundai Rotem - Unmanned Electric Passenger Trains
33. Inekon - Trio Low Floor Tram
34. Inekon - 04 Superior Low Floor Tram
35. Inekon - 11 Pento Low Floor Tram
36. JSC Kolomensky Zavoc - EP2K Passenger Electric Locomotive
37. Kawasaki - SWIMO Ultra Low Floor Tramway
38. Kawasaki - JR East 200 Electric Passenger Extreme Cold Weather Train
39. Kawasaki - 05 Series Electric Subway Train
40. Kawasaki - 22 Series Electric Subway Train
41. Kawasaki - 66 Series Electric Subway Train
42. Kawasaki - 70-000 High Speed Electric Rail Train
43. Kawasaki - 2000 Series High Speed Electric Rail Train
44. Kawasaki - 1000 Series Electric Subway Train
45. Kawasaki - 3000 Series Electric Subway Train
46. Kawasaki - 5000 Series Electric Subway Train
47. Kawasaki - 6300 Series Electric Subway Train
48. Kawasaki - 8000 Series Electric Subway Train
49. Kawasaki - 16000 Series Electric Subway Train
50. Kawasaki - R143 Series Electric Subway Train
51. Kawasaki - PA-5 Commuter Electric Train
52. Kawasaki - 30000 Series Electric Railway Train
53. Kawasaki - 1000 Series Monorail Vehicle
54. Kawasaki - efSET Electric High Speed Railway Vehicle
55. Nippon Sharyo - Light Rail Electric Vehicles (LACMTA)
56. Nippon Sharyo - Model 800 Low Floor Light Rail Electric Vehicles
57. Nippon Sharyo - Gallery Type Bi-Level EMU
58. Nippon Sharyo - Highliner Gallery Type Bi-Level EMU
59. Nippon Sharyo - Commuter EMU
60. Nippon Sharyo - AE100 Express EMU
61. Nippon Sharyo - Series 215 EMU
62. Nippon Sharyo - Series 371 Express EMU
63. Nippon Sharyo - Series 683 Express EMU
64. Nippon Sharyo - Series 1700 Express EMU
65. Nippon Sharyo - Series 2000 Electric EMU
66. Nippon Sharyo - Series 2200 Electric EMU
67. Nippon Sharyo - Series 50000 Express EMU
68. Nippon Sharyo - Series 60000 Express EMU
69. Nippon Sharyo - Series 7000 Driverless Tram With Rubber tires
70. Nippon Sharyo - Model HSST-100 Linimo Maglev Train Fully Auitomated
71. Nippon Sharyo - Model 40 Suspended Monorail
72. Nippon Sharyo - Light Rail Vehicle
73. Patentes Taolgo Sl - Electric Locomotive
74. Scoda Electric - Emil Zatopek Electric Passenger Locomotive
75. Scoda Electric - Single Deck Electric Unit Passenger Train
76. Scoda Electric - Double Single Deck Electric Unit Passenger Train
77. Scoda Electric - Monorail Passenger Train
78. Siemens - Avenio Single Articulated Tram Low Floor
79. Siemens - Avenio Single Articulated Tram Low Floor
80. Siemens - Streetcar S70 Light Rail Passenger Train
81. Swiss Stadler Rail Group FLIRT High Speed Low Floor Multi Unit Passenger Rail

82. Swiss Stadler Rail Group FLIRT 160 High Speed Low Floor Single Decker Passenger Train
83. Swiss Stadler Rail Group - KISS200 long Distance Double Decker Passenger Train
84. Swiss Stadler Rail Group - TANGO City Train High or Low Floor
85. Swiss Stadler Rail Group - TRAMLINK Multi Link Low Floor Train
86. Titagarh - TSR Lenord Double Deck EMU
87. Titagarh - TAF Double Deck EMU
88. Titagarh - ETR500 High Speed Trainset
89. Titagarh - E403 Electric Loco
90. Titagarh - E404.600 High Speed Electric Loco
91. Titagarh - EMUCVS Articulated Single Deck EMU Metrostar
92. Toshiba - 15E Electric Locomotives
93. Toshiba - 19E Electric Locomotives Dual-Voltage
94. Toshiba - SciB Battery Light Rail Transit
95. Toshiba - HSR High Speed Rail
96. Tulomsas - E68000 Electric Outline Engine Passenger Train
97. WINDHOFF Bahn- und Anlagentechnik GmbH

Note: All electric trains in the Netherlands are now 100% Wind Powered

Freight Train

1. Alstrom – 800 Prima T8 (WAG12)
2. CRRC Zhuzhou Locomotive Co. LTD - HX1F Electric Locomotive
3. CRRC Zhuzhou Locomotive Co. LTD - HX 1B Electric Locomotive
4. CRRC Zhuzhou Locomotive Co. LTD - HX 1C Electric Locomotive
5. CRRC Zhuzhou Locomotive Co. LTD - HX 1 Electric Locomotive
6. CRRC Zhuzhou Locomotive Co. LTD - SS Electric Locomotive
7. CRRC Zhuzhou Locomotive Co. LTD - 22E Dual-Voltage
8. CRRC Zhuzhou Locomotive Co. LTD - 21E Dual-Voltage Narrow
9. CRRC Zhuzhou Locomotive Co. LTD - 20E Dual-Voltage Narrow
10. CRRC Zhuzhou Locomotive Co. LTD - KZ4AC
11. CRRC Zhuzhou Locomotive Co. LTD - O'Z-Y
12. Kawasaki - JR Cargo EF 210 Electric Locomotive
13. Kawasaki - JR Cargo EF 510 Electric Locomotive
14. Kawasaki - JR Freight M 250 Super Rail Cargo Electric Locomotive
15. Kawasaki - 6K Freight Electric Locomotive
16. Schoma Lokomotiven - Electric Tunnel Locomotives
17. Siemens - eHighway Freight System
18. Swiss Stadler Rail Group - NG Shunting Locomotive
19. Swiss Stadler Rail Group - Tailor Made Locomotives
20. Tulomsas - E43000 Electric Locomotive
21. Tulomsas - E1000 Electric Maneuvering Engine
22. Tulomsas - E68000 Electric Outline Engine Freight Train

Passenger Van

1. Green4U Technologies - Passenger Cargo Van
2. Lightning Systems - Ford Transit EV 350HD Passenger Wagon
3. Mercedes-Benz - eVito Passenger Van
4. VIA - Passenger Van
5. Zenith Motors - Electric Passenger Van

Passenger/Shuttle Buses

1. Altrom – Aptis Electric Bus
2. Ameritrans Bus - All-Electric Motiv ePCS On Ford E450 Chassis 25 Passenger Shuttle Bus
3. Advanced Vehicle Manufacturing (AVM) - All Electric Mid-Size Shuttle Bus EV21
4. Advanced Vehicle Manufacturing (AVM) - All Electric Mid-Size Shuttle Bus EV27
5. Advanced Vehicle Manufacturing (AVM) - All Electric Mid-Size Shuttle Bus EV33
6. BYD Motors - C6 23-Ft Zero-Emission Electric Motor Coach
7. BYD Motors - K7M 30-Ft All Electric Zero-Emission Transit Bus
8. BYD Motors - K9s 35-Ft Zero-Emission Transit Bus
9. BYD Motors - K9M 40-Ft All Electric Zero-Emission Transit Bus
10. BYD Motors - K9S 40-Ft All Electric Zero-Emission Transit Bus
11. BYD Motors - C9 40-Foot Zero-Emission Electric Motor Coach
12. BYD Motors - C10M 45-Ft Articulated All Electric Coach
13. BYD Motors - K11M 60-Ft Articulated All Electric Zero-Emission Transit Bus
14. Green4U Technologies - Shuttle Bus
15. Green4U Technologies - Touring Bus
16. GreenPower - EV350 40-Foot All Electric
17. GreenPower - EV550 40-Foot All Electric Double Decker Bus
18. GreenPower - SYNAPSE 72 All Electric Shuttle Bus
19. International IC Bus - IC charge All-Electric Bus
20. Mercedes-Benz - eCitaro
21. Motiv Power Systems - EPIC 4 Passenger Bus
22. Motiv Power Systems - EPIC 6 Passenger Bus
23. New Flyer - Xcelior XE 35 Bus With Lithion-Ion Battery Pack
24. New Flyer - Xcelior XE 40 Bus With Lithion-Ion Battery Pack
25. Phoenix Motorcars - ZEUS-Zero Emissions Utility Shuttles
26. Proterra - Catalyst FC 35-Foot Urban Transit Bus
27. Proterra - Catalyst XR 35-Foot Urban Transit Bus
28. Proterra - Catalyst E2 35-Foot Urban Transit Bus
29. Proterra - Catalyst FC 40-Foot Urban Transit Bus
30. Proterra - Catalyst XR 40-Foot Urban Transit Bus
31. Proterra - Catalyst E2 40-Foot Urban Transit Bus
32. Solaris - Urbino 8 LE Electric Bus
33. Solaris - Urbino 9 LE Electric Bus
34. Solaris - Urbino 12 LE Electric Bus
35. Solaris - Urbino 18 LE Electric Bus
36. Toshiba - Sora FC EV Bus
37. VDL Bus & Coach - Citea SLF-120 Electric Bus
38. VDL Bus & Coach - Citea SLF-121 Electric Bus
39. VDL Bus & Coach - Citea SLFA-180 Electric Bus
40. VDL Bus & Coach - Citea SLFA-181 Electric Bus
41. VDL Bus & Coach - Citea SLFA-187 Electric Bus
42. VDL Bus & Coach - Citea LLE - 99 Electric Bus
43. Zenith Motors - Electric Mini Bus

Compact Shuttle

1. Columbia - 6 Passenger Shuttle
2. Columbia - MVP 14 Passenger Shuttle

School Buses

1. ADOMANI - Electric School Bus
2. Blue Bird - Type D RE Electric School Bus
3. Blue Bird - Type A Micro Bird G5 Electric School Bus
4. Creative Bus Sales Inc. - Type C Motiv All-Eectric Powertrain With Ford F59 Starcraft School Bus
5. GreenPower - SYNAPSE 72 All Electric School Bus

6. LION Electric - eLion Type C School Bus
7. Motiv Power Systems - eQuest XL All-Eectric Powertrain With Ford F59 Starcraft School Bus
8. Motiv Power Systems - EPIC 4 Type A School Bus
9. Motiv Power Systems - EPIC 5
10. Motiv Power Systems - EPIC 6 Type C School Bus
11. Thomas Built Buses – Saf-T-Liner C2 Jouley Electric School Bus
12. Transpower - Type C Transit School Bus
13. Trans Tech Bus - SSTe - Motiv ePCS On Ford E450 Chassis School Bus

Taxi

1. BYD - E6 Electric Taxi
2. Electric Cab North America - Micro Transit Shuttles
3. Nissan LEAF Electric Taxi

Underground Mining Equipment

1. Epiroc - Scooptram ST7 Battery Electric Loader
2. Epiroc - Scooptram EST1030 Electric Loader
3. Epiroc - Scooptram EST2D Electric Loader
4. Epiroc - Scooptram EST3.5 Electric Loader
5. Epiroc - Minetruck MT2010
6. Epiroc - Minetruck MT42
7. Epiroc - Boomer E2 Battery Face Drill Rig

Note:
1. CFASE conducts periodic searches for all vehicles and equipment that are zero emissions. Our survey is the most comprehensive document of zero emission technologies.
2. CFASE contacted the manufacturer directly to obtain information or information was available on the manufacturer website.
3. Commercially Available means that the manufacturer is accepting orders for delivery to customer in less than one year. Time of delivery can vary due to the type and number of vehicles ordered.
4. Vehicles and Equipment can be new or used and be retrofitted to be zero emission.
5. California CEQA law does not require a technology being considered as a project element or mitigation measure to be certified, verified or validated by any governmental agency. However, the agency and/or project sponsor must do its due diligence to confirm that the technology works for the proposed project application or a part of the project application. i.e Trucks can service short distance hauls but not long distance hauls.
6. California CEQA law allows technologies under R&D, pilot testing and demonstration testing to be considered as proposed a mitigation measure and does not require a technology to be commercially available at the time of the EIR, but does require the technology to be commercially available and meet all application performance requirements by the project completion date.

Coalition For A Safe Environment
1601 N. Wilmington Blvd., Ste. B, Wilmington, CA 90744
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Coalition For A Safe Environment (CFASE)

Wilmington Container Storage Yards Survey

Attachment "Wilmington Container..." is Comment CFASE-24

10.31.2016

117 Container Storage Yard (CSY) Locations

Notes:

1. CFASE Container Storage Yard definition: Has 5 or more containers stored at location temporarily, long term or permanent).
2. Containers may be stacked as high as 5 high on top of each other.
3. Containers are traditionally stacked on the ground. (? Long Term or Permanently Stored)
4. Containers may be stored on a chassis. (? Temporary Storage)
5. Some Container Storage Yards now store Trucks, Chassis and TRU's. (TRU-Transport Refrigeration Unit)
6. Some Container Storage Yards now repair and maintain Trucks, Chassis and TRU's.
7. Some CSY's have no visible address, so we put the nearest street sign address. Addresses which are 400, 600 etc. may be the corner street sign address.
8. CFASE did not check CSY with the City of Los Angeles to verify type of business license, permit or waiver.

EJ Community Issues:

1. Unlicensed Business, Unpermitted Business and no approved Certificate of Occupancy.
2. Many public street routes to CSY's are not zoned for heavy duty trucks.
3. Trucks enter No Over 6,000 lb. truck streets even with posted signs.
4. New CSY's not complying with new City of Los Angeles CSY zoning and Q conditions.
5. Contaminated storage lot land PM dust ambient air pollution source from truck movement and wind. (Hydrocarbons)
6. PM dust from dirt lots are a major air pollution source which blow into adjacent residential neighborhoods.
7. Contaminated storage lot land dirt on truck tires and PM falls onto public streets, curbs and gutters.
8. TRU's on reefer containers are not evacuated & HFC's greenhouse gases escape into ambient air.
9. Illegal and improper hazardous materials storage, transport and disposal. No Risk Management Plan.
10. CSY's become Insect Vector Haven.
11. CSY's become Rat Vector Haven. Rats cross street becoming major resident complaint issue.
12. CSY's become Raccoon & Possum Vector Havens.
13. Some CSY's wash containers, trucks and chassis and the water run-off goes into public streets, curbs and gutters. If there are curbs and gutters.
14. Many CSY's are often stored on dirt lots and when it rains them fall over and slide down hill banks.
15. The majority of containers are made in Asia & suspected of using lead paint which deteriorates into flakes and powder which is toxic PM dust that drifts into the ambient air & adjacent residential neighborhoods.
16. Trucks often park in neighborhood streets waiting to enter CSY's.
17. Trucks often double park in streets waiting to enter CSY's.
18. Truck drivers use empty containers illegally to help move household furniture for friends & family.

Container Storage Yards:

1.		921 E. Opp Street	Wilmington, CA 90744	
2.	American Integrated	1502 E. Opp Street	Wilmington, CA 90744	
3.	Gold Point/ConGlobal Industries	1621 E. Opp Street	Wilmington, CA 90744	
4.	Excell Truck Services, Inc	505 N. Flint Ave.	Wilmington, CA 90744	310-404-7330
5.	FX Express	531 N. Flint Ave.	Wilmington, CA 90744	310-835-4504
6.	FX Express	525 Flint Ave.	Wilmington, CA 90744	
7.		522 N. Flint Ave	Wilmington, CA 90744	
8.		531 N. Flint Ave.	Wilmington, CA 90744	
9.	Certifresh	572 N. Flint Ave.	Wilmington, CA 90744	
10.		605 N. Flint Ave.	Wilmington, CA 90744	
11.		825 N. Flint Ave.	Wilmington, CA 90744	
12.		600 N. Preble Ave.	Wilmington, CA 90744	
13.		918 N. Preble Ave.	Wilmington, CA 90744	
14.		401 E. F Street	Wilmington, CA 90744	
15.		901 E. F Street	Wilmington, CA 90744	
16.		933 E. F Street	Wilmington, CA 90744	
17.		936 E. F Street	Wilmington, CA 90744	
18.		413 N. Eubank Ave.	Wilmington, CA 90744	
19.		514 N. Eubank Ave.	Wilmington, CA 90744	
20.		534 N. Eubank Ave.	Wilmington, CA 90744	
21.	Schafter Logistics	600 N. Eubank Ave.	Wilmington, CA 90744	
22.		900 N. Eubank Ave.	Wilmington, CA 90744	
23.		910 N. Eubank Ave.	Wilmington, CA 90744	
24.		930 N. Eubank Ave.	Wilmington, CA 90744	
25.		940 N. Eubank Ave.	Wilmington, CA 90744	
26.	ICE-International Cargo Equipment	1540 N. Eubank Ave.	Wilmington, CA 90744	
27.	IRE-International Refrigeration Services	1542 N. Eubank Ave.	Wilmington, CA 90744	
28.	DPE Container Sales & Modifications	1550 N. Eubank Ave.	Wilmington, CA 90744	
29.		444 N. Quay Ave.	Wilmington, CA 90744	
30.	PacAnchor Transportation, Inc.	425 N. Quay Ave.	Wilmington, CA 90744	562-435-6464
29.	Harbor Express	501 N. Quay Ave.	Wilmington, CA 90744	
30.		518 N. Quay Ave.	Wilmington, CA 90744	
31.		520 N. Quay Ave.	Wilmington, CA 90744	
32.	CPNJ Trucking Inc.	544 N. Quay Ave.	Wilmington, CA 90744	310-325-9100
33.		550 N. Quay Ave.	Wilmington, CA 90744	
34.		710 N. Quay Ave.	Wilmington, CA 90744	
35.		730 N. Quay Ave.	Wilmington, CA 90744	
36.		734 N. Quay Ave.	Wilmington, CA 90744	
37.	KNR Logistics	800 N. Quay Ave.	Wilmington, CA 90744	
38.		413 E Street	Wilmington, CA 90744	
39.		419 E Street	Wilmington, CA 90744	
40.		427 E Street	Wilmington, CA 90744	
41.		429 E Street	Wilmington, CA 90744	
42.		525 E Street	Wilmington, CA 90744	
43.	J & P Clutch	626 E Street	Wilmington, CA 90744	
44.		701 E Street	Wilmington, CA 90744	
45.		922 E Street	Wilmington, CA 90744	
46.	PacAnchor Transportation, Inc.	211 E. D Street	Wilmington, CA 90744	562-435-6464
47.	Swift Transportation	221 E. D Street	Wilmington, CA 90744	
48.	Tricon Transportation, Inc.	650 E. D Street	Wilmington, CA 90744	310-518-8900
49.		721 E. D Street	Wilmington, CA 90744	
50.		325 W. C Street	Wilmington, CA 90744	

51.	Pacific Container Carriers	335 W. C Street	Wilmington, CA 90744	310-518-8641
52.		400 W. C Street	Wilmington, CA 90744	
53.		425 W. C Street	Wilmington, CA 90744	
54.	UTI	429 W. C Street	Wilmington, CA 90744	
55.		509 W. C Street	Wilmington, CA 90744	
56.		512 W. C Street	Wilmington, CA 90744	
57.		519 W. C Street	Wilmington, CA 90744	
58.		232 E. G Street	Wilmington, CA 90744	
59.		412 E. G Street	Wilmington, CA 90744	
60.		417 E. G Street	Wilmington, CA 90744	
61.		420 E. G Street	Wilmington, CA 90744	
62.	Southbay Logistic Intl.	505 E. G Street	Wilmington, CA 90744	
63.	HBR	910 E. G Street	Wilmington, CA 90744	
64.		1027 E. G Street	Wilmington, CA 90744	
65.	WJE Trucking	1117 E. G Street	Wilmington, CA 90744	
66.	Athens Transportation	321 Lakme Ave.	Wilmington, CA 90744	
67.		536 McFarland Ave.	Wilmington, CA 90744	
68.	ASK Marine, Inc.	1020 McFarland Ave.	Wilmington, CA 90744	
69.		1025 McFarland Ave.	Wilmington, CA 90744	
70.		825 Mahar Ave.	Wilmington, CA 90744	
71.	TS Golden State Trucking Inc.	936 Mahar Ave.	Wilmington, CA 90744	
72.	ACX-USDA Certified Export Hay	920 Pacific Coast Hwy.	Wilmington, CA 90744	
73.	IBT-Intermodal Bridge Transport, Inc.	1919 E. Pacific Coast Hwy.	Wilmington, CA 90744	
74.	Pacific Coast Container, Inc.	1919 E. Pacific Coast Hwy.	Wilmington, CA 90744	
75.	Pacific Coast Container Inc.	1921 E. Pacific Coast Hwy.	Wilmington, CA 90744	
76.	Fast Lane Intermodal, LLC	2400 E. Pacific Coast Hwy.	Wilmington, CA 90744	
77.	Container Express Transport, Inc.	306 N. Avalon Blvd.	Wilmington, CA 90744	
78.	Pacific Trucks, LLC.	527 N. Avalon Blvd.	Wilmington, CA 90744	
79.	Container Intermodal Transport	816 N. Henry Ford Ave.	Wilmington, CA 90744	
80.	Pioneer Ocean Containers, Inc.	316 Banning Blvd.	Wilmington, CA 90744	
81.	Milestone Trucking	520 Banning Blvd.	Wilmington, CA 90744	
82.		522 Banning Blvd.	Wilmington, CA 90744	
83.		532 Banning Blvd.	Wilmington, CA 90744	
84.		536 Banning Blvd.	Wilmington, CA 90744	
85.	McLine Carrier Corp.	535 Banning Blvd.	Wilmington, CA 90744	
86.	Container Care International, Inc.	1711 Alameda Street	Wilmington, CA 90744	
87.	ConGlobal Industries	1711 Alameda Street	Wilmington, CA 90744	310-427-3125
88.		921 Goodrich Ave.	Wilmington, CA 90744	
89.	Long Beach Container Transport	1040 Goodrich Ave	Wilmington, CA 90744	
91.	Certified Container Services, LLC	1301 E. Lomita Blvd.	Wilmington, CA 90744	
92.	Ventura Transfer Company	1302 E. Lomita Blvd.	Wilmington, CA 90744	
93.	RES Refrigerated Container California	1304 E Lomita Blvd.	Wilmington, CA 90744	
94.		1320 E. Lomita Blvd.	Wilmington, CA 90744	
95.	Martin Container, Inc.	1402 E. Lomita Blvd.	Wilmington, CA 90744	310-830-0500
96.	Absolute Intermodal, LLC	1500 E. Lomita Blvd.	Wilmington, CA 90744	
97.	Harbor Division, Inc.	1500 E. Lomita Blvd.	Wilmington, CA 90744	
98.	CMI-California Multimodal LLC	1501 E. Lomita Blvd.	Wilmington, CA 90744	
99.	Con Global Industrial Container Sales	1507 E. Lomita Blvd.	Wilmington, CA 90744	
100.		330 Lecouveur Ave.	Wilmington, CA 90744	
101.		420 Lecouveur Ave.	Wilmington, CA 90744	
102.		422 Lecouveur Ave.	Wilmington, CA 90744	
103.		521 Lecouveur Ave.	Wilmington, CA 90744	
104.		523 Lecouveur Ave.	Wilmington, CA 90744	
105.		602 Lecouveur Ave.	Wilmington, CA 90744	

106.	WJE Trucking	800 E. Colon Street	Wilmington, CA 90744	
107.	Anderson Hay Company	900 E. Colon Street	Wilmington, CA 90744	
108.		1000 E. Sandison St.	Wilmington, CA 90744	
109.		1811 Mauretania St.	Wilmington, CA 90744	
110.	Anviari	1733 Robidoux St.	Wilmington, CA 90744	
111.		1815 Robidoux St.	Wilmington, CA 90744	
112.		1857 Robidoux St.	Wilmington, CA 90744	
113.		506 Sanford Ave.	Wilmington, CA 90744	
114.		544 Sanford Ave.	Wilmington, CA 90744	
115.		642 Sanford Ave.	Wilmington, CA 90744	
116.		716 Sanford Ave.	Wilmington, CA 90744	
117.	Tradelink Transport Inc.	1331 E. Anaheim St.	Wilmington, CA 90744	310-513-0900

Response to Comment CFASE-1

This is not a comment on the adequacy of the Recirculated DSEIR. As explained in Section 1.2.3.2 of the RDSEIR, the ASJ allowed for China Shipping to continue operating the terminal under the existing lease (Permit No. 999) signed in 2001. While the lease was supposed to have been amended after certification of the 2008 EIR, "[t]he preparation of an EIR is not generally the appropriate forum for determining the nature and consequences of prior conduct of a project applicant . . .." (Eureka Citizens for Responsible Gov't v. City of Eureka (2007) 147 Cal.App.4th 357, 371.) As required under CEQA, the Recirculated DSEIR will be used by LAHD, as the lead agency under CEQA, in making a decision regarding the future operation of the Revised Project. If it is determined that changes to existing mitigation measures are recommended as a result of the Recirculated DSEIR, the Board of Harbor Commissioners will consider amending the lease for operations at Berths 97-109 to include those measures. The Recirculated DSEIR does not determine how those measures will be implemented or enforced. Any action by LAHD to enforce mitigation measures (past or future), or other lease provisions, would be a separate proceeding outside the scope of this EIR process. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment CFASE-2

LAHD disagrees with the claim that the zero-emission trucks cited by the commenter are suitable for deployment in port drayage service and that "long-haul trucks will be available in 2019." Please see Master Response 2: Zero-and Near-Zero-Emission Technologies, which reviews the makes and models cited by the comment; the report "Assessment of the Feasibility of Requiring Alternative-Technology Drayage Trucks at Individual Container Terminals," referenced as LAHD (2017) in the Recirculated DSEIR and hereinafter "Drayage Truck Study;" and the report "2018 Feasibility Assessment For Drayage Trucks" (Tetra Tech/GNA, 2019a). Those analyses demonstrate that while zero-emission heavy-duty (i.e., Class 7 and 8) trucks are commercially available (although the numbers that could be supplied are uncertain), those trucks are not yet proven in port drayage applications, nor is adequate infrastructure to support large-scale deployment available. More testing, which the ports, the regulatory agencies, and the drayage and trucking industries are conducting, will likely demonstrate the suitability of those vehicles in at least some aspects of drayage service; as the technology becomes commercially viable it will be deployed in accordance with the goals and strategies of the 2017 CAAP. As the technology for zero-emission trucks is still unproven and, thus, cannot be deemed feasible, such a measure would be unenforceable and imposing it would be a violation of CEQA.

In addition, as the Drayage Truck Study shows, mandating the use of a particular technology in drayage service at a single terminal is infeasible, as individual terminals have little or no control over drayage trucks and would be placed at a severe competitive disadvantage if forced to turn away other technologies. Furthermore, as described in the Drayage Truck Study, the port-area drayage industry involves approximately 15,000 trucks, only a very few of which (i.e., those currently in demonstration testing) are zero-emissions. Ensuring that only zero-emissions trucks serviced the CS Terminal would require replacing the current diesel-powered fleet with zero-emissions units. Even if the technology were ready for deployment in regular service, that replacement would cost an estimated 3 to 5 billion dollars just for the vehicles (POLB and POLA, 2017), and the

charging infrastructure to support the fleet would be many millions more. Such an expenditure is clearly infeasible as mitigation for a single project.

The Port has worked diligently with the Port of Long Beach, the SCAQMD, CARB, and the drayage industry for well over a decade to reduce the emissions of air pollutants from the drayage fleet serving San Pedro Bay marine terminals. Through the Clean Trucks Program, the older, high-polluting trucks that characterized the drayage fleet in the 1990s have been replaced by trucks meeting 2007 and 2010 engine standards. The Clean Truck Program was successful in large part because of massive financial support by the Ports and regulatory agencies in the form of grants, incentives, and outright purchase of older trucks. The result, as stated in the 2017 CAAP (p. 33) has been a 97% decrease in emissions of diesel particulate matter, the principle toxic air contaminant associated with trucks, since 2005. The CAAP acknowledges that trucks remain a significant source of air pollution and has committed the Ports to a goal of transitioning the drayage fleet to zero-emissions technologies by 2035. This is an aggressive goal, considering that, as explained above, zero- and near-zero-emissions drayage trucks have not yet been certified as feasible technologies. The transition will require substantial effort and financial support by all parties involved -- the ports, the regulatory agencies, the drayage industry, and the truck manufacturing industry -- because the issue must be addressed on a port-wide basis, not a project-by-project basis.

Finally, the suggestion to include a "Short-Haul Truck Phase-In Plan" and a "Long-Haul Truck Phase-In Plan" as a mitigation measure lacks any detail regarding what circumstances it would apply to, who would be responsible for implementing it, and how the drayage industry would be affected by it. Accordingly, it cannot be evaluated or responded to in this FSEIR.

Response to Comment CFASE-3

The basis for the figures cited in the comment is unclear. Table 2-3 of the Recirculated DSEIR shows that the CS Terminal handled 1.088 million TEUs in 2014, 19% through the on-dock railyard, and is projected to handle 1.698 million TEUs in 2036-2045, 14% through the on-dock railyard. Accordingly, the increase in terminal throughput is projected to be approximately 610,000 TEUs, and the increase in on-dock rail throughput approximately 31,000 TEUs, or 15%. Note that 2014 is not a baseline year in either the 2008 EIS/EIR (the baseline is 2000-2001) or in the Recirculated DSEIR (the baseline is 2008). Note also that the increase in terminal throughput that is projected in the Recirculated DSEIR is not attributable to any feature of the Revised Project, but is based market forces that are entirely independent of the Revised Project. See Section 1.4.1 of the Recirculated DSEIR.

The comment is incorrect in stating that an increase in on-dock rail throughput will result in more locomotive emissions in future years 2036-2045 than in 2014. Rail activity will increase somewhat in the future. However, the emission factors for locomotive engines are expected to decrease proportionately more for criteria air pollutants such as NOx, PM and VOC, due to the projected turnover of the locomotive and switcher fleet towards a higher mix of cleaner engines (assuming no major breakthroughs in locomotive emission controls). Accordingly, as shown in Table RTC CFASE-3, below, future emissions of those pollutants would be substantially lower than current emissions.

Table RTC CFASE-3: Annual locomotive emissions (switchers and line-haul combined) in tons per year for the Revised Project

Pollutant	Year	Rail Offsite	Rail Onsite	Total (tpy)
NOx	2008	199.504	13.085	212.589
	2012	176.470	12.060	188.530
	2014	171.443	12.591	184.034
	2018	202.644	11.645	214.290
	2023	243.945	11.958	255.903
	2030	177.252	8.501	185.754
	2036	114.603	5.980	120.583
	2045	62.075	3.809	65.884
VOC	2008	10.431	0.693	11.125
	2012	8.714	0.600	9.314
	2014	7.519	0.563	8.083
	2018	7.692	0.462	8.154
	2023	8.739	0.445	9.184
	2030	6.105	0.309	6.413
	2036	3.883	0.217	4.100
	2045	2.274	0.152	2.427
PM10	2008	7.037	0.455	7.492
	2012	5.904	0.383	6.288
	2014	5.066	0.350	5.416
	2018	5.036	0.269	5.306
	2023	5.536	0.259	5.796
	2030	3.608	0.164	3.771
	2036	2.052	0.100	2.152
	2045	0.943	0.053	0.996
CO	2008	35.234	2.369	37.602
	2012	37.607	2.728	40.335
	2014	38.603	3.025	41.629
	2018	45.119	2.820	47.939
	2023	67.954	3.443	71.397
	2030	71.165	3.419	74.584
	2036	67.272	3.384	70.656
	2045	61.918	3.383	65.301

Note: these emissions are found in Table B1-669 “Proposed Mitigated Scenario Annual Emissions by Source Category and Analysis Year in ton/year” in Appendix B1 of RDSEIR. Page B1-352

For some pollutants such as CO, SO_2, and CO_2, the emissions would not decrease over time because emission factors for those pollutants are not affected by the Tier level of the fleet (e.g., CO in Table RTC CFASE-3); in that case the emissions trend is driven by the on-dock rail throughput. However, those emissions would be less than were analyzed in

the 2008 EIS/EIR because on-dock rail throughput is forecasted to be lower: as shown in Table 2-3 of the Recirculated DSEIR, the 2008 EIS/EIR assumed that 17% of 1.551 million TEUs, or approximately 264,000 TEUs, would be handled on-dock, whereas the Recirculated DSEIR assumed, on the basis of the Port's updated cargo forecasts, that 14% of 1.698 million TEUs, or approximately 238,000 TEUs would be handled on-dock. Accordingly, locomotive emissions from the Revised Project would not be greater than those of the Approved Project.

Note, too, that locomotive emissions are addressed in the 2017 CAAP and are not, in any case, an issue that can be solved on a terminal-by-terminal basis because of the nature of locomotive operations, which range from port-wide (for PHL switching units) to nation-wide (for Class 1 line-haul units). Please see Master Response 3: Port-Wide Emission Reduction Programs for more information on the issue of locomotive emission reduction measures.

Greenhouse gas emissions from rail activity associated with the Revised Project are analyzed in compliance with CEQA in section 3.2 of the Recirculated DSEIR. Those emissions do not violate AB 32 or AB 617, which concern regulation of greenhouse gases at the statewide level and thus do not apply directly to the Revised Project.

Response to Comment CFASE-4

The LAHD disagrees with the comment's contention that there are "numerous available, feasible technology mitigation" that could be adopted in the SEIR that are not already included in the Revised Project. The LAHD reviewed the brand and model names listed in the attachment referenced by the comment (please see Master Response 2: Zero- and Near-Zero-Emission Technologies) and concluded that 1) most are not relevant to the CS Terminal (for example, passenger train locomotives, light-duty and delivery trucks, light-duty forklifts, all construction equipment, refuse and fire trucks, school buses, taxis, and mining equipment), and 2) those that are relevant or potentially relevant (e.g., cargo-handling equipment, freight locomotives, heavy-duty trucks, and forklifts) have been considered and incorporated into the Revised Project where feasible. Note, too, that the ship-to-shore wharf cranes at the CS Terminal are already electric-powered, as are all of the wharf cranes at container terminals in the Port. Please see Master Response 2: Zero- and Near-Zero-Emission Technologies for a detailed analysis of the feasibility of the listed technologies.

Response to Comment CFASE-5

MM AQ-9 as currently written does apply to all vessels that call at the CS Terminal, regardless of the company that operates them. The meaning of the comment's statement, "the China Shipping Terminal currently has the shore-power capability of 100% compliance rate by 2019" is unclear. If, as seems likely, it is intended to imply that there is no reason why all vessels cannot use shore power, then LAHD disagrees: in fact, as described below, some of the vessels that call at the CS Terminal do not have the capability to use shore power.

The comment provides no rationale or requirement under CEQA for demanding that shipping companies provide 30-day notification of their plans, and the commenter may be unaware that the Port has already expended considerable sums of money in developing, with GE Transportation, the Port Optimizer system, which provides real-time data on supply chain modes, including 14-day advanced visibility for vessel tracking. In addition, the Port already requires 72-hour notice by AMP-capable vessels. Finally,

please note that the Port has no role in scheduling vessels or arranging for AMECS or METS-1 services for non-AMP-capable vessels; that is a private business arrangement between the shipping company and the service provider.

MM AQ-9 does require the use of an alternative emissions at-berth emission control capture system; the only difference between MM AQ-9 and the comment's demand is that MM AQ-9 recognizes the possibility that an alternative system may not be available for every non-AMP-capable vessel that calls, as described below; therefore, the air quality impact analysis appropriately considers lower utilization rates that are feasible and attainable. Also, the LAHD does not agree that only one company can provide alternative treatment: CAEM's MET-1 system is also in operation in the Port. Please see also Master Response 3: Port-Wide Emission Reduction Programs for more detail on AMP.

The LAHD does not agree that the AMECS system is "100% feasible and available technology". AEG's AMECS is, as the comment points out, CARB-certified, and has been utilized in the two ports as an alternative to AMP for at-berth emissions control. Although AMECS and the similar METS-1 system (also CARB-certified) have been in operation in the Port, the number of units they deploy is limited, meaning that any time more vessels in the San Pedro Bay port complex need at-berth emissions control than AEG and CAEM have units available, the additional vessels will not be able to achieve emission control.

This observation is supported by data the LAHD has collected specifically for the CS Terminal (2018 AMP or Equivalent Data at CS Terminal from the Marine Exchange and e-mail communication from M. Wheeler to L. Ochsner 2-27-2019). In 2018, 98% of all ship calls at the CS Terminal utilized AMP or an AMP-equivalent technology. The vessel *Kristina* was not able to use AMECS or METS-1 because both systems were in use at other terminals during at least two visits. In addition, due to infrastructure issues and an emergency, at least two other vessels (*NYK Daedalus* and *ER Felixstowe*) were not able to use AMP or an equivalent technology. As shown in Table 2-1 in Section 2.2.3 of the Recirculated DSEIR, 100% AMP or AMP equivalent for all ship calls at the CS Terminal has not been achieved for any year from 2008 to 2017; the same was true in 2018. These facts illustrate the inability of any terminal to achieve emissions reductions for 100% of vessels and justifies the language of MM AQ-9 (and the analysis to support this measure for all future years, since it does not overestimate reductions by assuming 100% compliance) as presented in the Recirculated DSEIR.

In summary, the LAHD encourages all tenants to meet 100% utilization of shore power but recognizes that real-world conditions prevent achievement of that goal, as described in the discussion of MM AQ-9 in Section 2.5.2.1 of the Recirculated DSEIR. Please see also Master Response 3: Port-Wide Emission Reduction Programs for more detail on AMP.

The commenter states, "At this time only one company technology has been certified by the California Air Resources Board that can service all container ships which is the Advanced Environmental Group – AMECS: Advanced Maritime Emissions Control System. This is a 100% feasible and available technology contrary to your conclusion. An order can be placed and delivery within 6-12 months." Even if this may accurately describe the ordering process, it nevertheless ignores the challenges of deploying those additional units once they arrive. At present there are only two barge-mounted units in the ports and they have been accommodated at available locations. However, as the 2017

CAAP points out (p. 63), there are numerous impediments to deploying enough emission-control systems to handle the entire fleet, given the space and safety constraints for at-berth systems, whether barge-based or land-based. Operational and infrastructure assessments are needed for the deployment of additional alternative at-berth control units, including technologies other than the barge-based AMECS and METS-1, to service the San Pedro Bay ports complex.

A recent analysis (POLB and POLA, 2019) summarizing the challenges facing barge-based alternative control systems concluded that alternative compliance systems could actually increase greenhouse gases, have not had safety issues adequately resolved, and are not obviously cost effective, considering the already-high rate of at-berth emissions control for containerships. That analysis also pointed out the challenges of finding berthing space for barge-based technologies, given the high proportion of waterfront space already leased, and casts doubt on the commenter's statement regarding delivery times, given that no facilities are currently producing either the AMECS or the METS-1 systems.

With respect to the suggested per-container "tariff" and the use of the resultant revenues, please see Response to Comment CFASE-9.

Response to Comment CFASE-6

The commenter presents no data or evidence to support the assertion that AMECS is more efficient at capturing and treating emissions than AMP, and lacking such data or evidence, LAHD has no basis for accepting that statement as "fact". AMP eliminates all at-berth emissions from auxiliary engines because those engines are shut down once AMP is connected. AMECS, on the other hand, captures 80 – 90% of the emissions from auxiliary engines once it is connected (80% when connected to two auxiliary engine ports, 90% when connected to one) and treats them to a certified control efficiency of 95% for $PM_{2.5}$ and 90% for NO_X (CARB Executive Order AB-15-02; https://www.arb.ca.gov/ports/shorepower/eo/ab-15-02.pdf); note that the AMECS generators produce untreated emissions of their own. The net result is that AMP results in zero emissions while AMECS does not.

Note, too, that the AMECS system may not be able to provide effective emissions control for the largest vessels that call at the Port. CARB has certified the system to handle auxiliary engines with power ratings up to 3,700 kW, but container vessels over 12,000 TEUs capacity (and some smaller vessels) have auxiliary engines with higher power ratings. For those vessels, which in 2017 amounted to approximately 10% of vessel calls (A. Coluso, pers. comm.), there is no information regarding the emissions capture and control efficiencies. AMP-capable vessels are not so limited: every AMP-capable vessel can connect with the shore-based electrical grid.

Response to Comment CFASE-7

CEQA requires that a lead agency adopt a program for monitoring and/or reporting to ensure that mitigation measures imposed for a particular project are implemented in accordance with the program and by the responsible entities that are identified. CEQA does not mandate specific requirements for the program, but rather provides substantial flexibility to lead agencies, such as LAHD, to adopt monitoring and reporting programs and tailor them to specific projects. The MMRP for the Revised Project specifies the requirements of each mitigation measure, the timing of when the measure is required to be implemented, the responsible party for carrying out the measure, the responsible party

for monitoring and oversight of the mitigation measure, and the applicable reporting requirements of the mitigation measure such as annual reports to the Board to disclose the status of mitigation measures. There is no requirement under CEQA that the lead agency must compile or publish any compliance report from its oversight of the mitigation monitoring and reporting program. Nonetheless, for non-CEQA purposes, the comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

Response to Comment CFASE-8

In Table 2-1 the Recirculated DSEIR did disclose the VSRP compliance of vessels calling the CS Terminal in 2014. The commenter errs in characterizing that compliance as 99%, since compliance between 20 and 40 nm was actually 96%. Furthermore, the commenter gives no technical basis for recommending 100% compliance despite the Recirculated DSEIR's (Section 2.5.2.1) and the 2017 CAAP's (Section 1.4) explanations for why 100%, while a goal, is not a reasonable compliance mandate given the uncertainties involved in vessel operation. Accordingly, the LAHD maintains that the compliance requirement of 95% as stated in MM AQ-10 represents the maximum feasible mitigation.

Response to Comment CFASE-9

The commenter is suggesting a monetary penalty or fee for failure to comply with a mitigation measure. CEQA does not mandate specific requirements for a mitigation program, but rather provides substantial flexibility to lead agencies, such as LAHD, to adopt monitoring and reporting programs and tailor them to specific projects. Monetary penalties are not required by CEQA to be included as enforcement mechanisms in a mitigation program. The LAHD does not agree that a penalty for non-compliance with the VSRP would be effective mitigation designed to minimize the Revised Project's significant environmental impacts (Public Resources Code §§ 21002.1(a), 21100(b)(3).) Providing a penalty could encourage non-compliance with the mitigation measures, as an operator could opt to pay the penalty rather than comply with the mitigation measure.

Per CEQA, LAHD will adopt a mitigation monitoring and reporting program designed to ensure compliance with mitigation measures during the implementation of the Revised Project. As stated in the Recirculated DSEIR, LAHD implements mitigation measures on container terminal projects by including them in leases with its tenants. Although there are procedural requirements and approvals described in Sections 1.8.1 and 1.8.2 of the Recirculated DSEIR related to implementation or non-implementation of the Revised Project, the lease amendment process to incorporate and enforce mitigation measures is a separate action, requiring the Board's approval, that would be subject to a negotiation process and LAHD's leasing policy (LAHD, 2013b). Currently, LAHD's leasing policy does not contain any provisions for penalties or fees associated with non-compliance with mitigation measures or environmental requirements. The leasing policy requires tenants to comply with all applicable environmental standards including, but not limited to, federal, state, and local laws and regulations. It allows environmental deposits to be created, depending on risk factors associated with the tenant's use of the leasehold. These policies are all subject to a negotiation process until such time a lease is brought to the Board for consideration and approval. Nonetheless, for non-CEQA purposes, the comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

Although the commenter has recommended a calculation method to impose penalties for non-compliance with the VSRP at $100 per container for containerships and $1.00 per metric ton of cargo for non-containerships, the commenter provides no data or evidence to support how this monetary contribution is proportional to the environmental impact resulting from failure to comply with VSRP. The commenter also recommends that 50% of the funds should go towards "the POLA Harbor Enforcement Program," which is undefined by the commenter and currently does not exist at the Port, and 50% towards the Harbor Community Benefit Foundation (HCBF) for off-port community environmental impacts.

With respect to the HCBF, please see Response to Comment CFASE-14, below. Regarding the comment that LAHD is required to publish a compliance report, please see Response to Comment CFASE-7.

Response to Comment CFASE-10

The LAHD disagrees that there are near-zero-emissions yard tractors that could be deployed immediately. The list of equipment referred to by the commenter was attached to the comment letter as "Zero Emission Transportation Vehicles, Cargo Handling Equipment & Construction Equipment Commercial Availability Survey." The list includes over 400 models of various types of equipment, both near-zero- and zero-emissions units. The Port commissioned an expert review of the list by Gladstein Neandross & Associates (GNA) to determine which units are potentially feasible for marine terminal service. GNA (2019) found that the majority of the listed equipment are either irrelevant to container terminal operations (e.g., light-duty trucks and vans, construction equipment, passenger trains, school buses, and fire and refuse trucks) or are not types of equipment included in the Revised Project's mitigation measures (e.g., rail-mounted gantry cranes). That process resulted in 187 pieces of equipment (nearly half of them light-duty forklifts) that were potentially relevant to the CS Terminal; those models were subjected to basic technical screening criteria for operation in a container terminal.

The 82 pieces of equipment that passed the technical screening criteria included forklifts, yard tractors, electric rubber-tired gantry cranes (ERTGs), shuttle buses, and drayage trucks. Those units were then screened for commercial availability by contacting manufacturers. The results of that screening are presented in Table RTC CFASE-10a, below, and include five yard tractor models. Ten of the 82 units (three forklifts, six shuttle buses, and an RTG) could not be evaluated for commercial availability because the manufacturers did not respond to contacts, but GNA concluded on the basis of other information that two of the forklifts and all six shuttle buses would not be available.

Table RTC CFASE-10a. Results of GNA Screening for Commercial Availability

Make	Model	Commercial Availability
Forklift (5-10-ton capacity)		
Clark	GEX 40/45/50 Series Electric Forklifts	Pass
Doosan	B40/45/50X-5 Series Electric 4-Wheel Forklift	Pass
Hangcha	A Series 4 Wheeled Forklift	Pass
Hangcha	J Series 4 Wheeled Forklift	Fail: Out of production
Hyster	J80-100XN Series Electric Pneumatic Tire	Pass
Hyundai Construction	Series 9 50B-9 Four Wheeled Forklift	Pass

Make	Model	Commercial Availability
Kalmar	ECG50	Pass: Europe now, NorthAm in 2019
Kalmar	ECG90	Pass: Europe now, NorthAm in 2019
Yard Tractor		
BYD Motors	8TT Battery Electric Tractor	Pass
BYD Motors	8Y Tractor	Pass
Kalmar Ottawa	T2E Electric Terminal Tractor	Pass
Orange EV	T-Series 4x2 Terminal Truck	Pass
Orange EV	T-Series 4x2 Terminal Truck Conversion of Kalmar Ottawa	Fail: Not available
Orange EV	T-Series Reman (Conversion/Repower)	Pass
Transpower	ElecTruck Yard Tractor	Fail: Not available
Electric Rubber-Tired Gantry (RTG) Crane		
Kalmar	E-One2 Zero Emission RTG	Pass
Konecranes	Electric Cable Reel RTG	Pass
Konecranes	Electric Busbar RTG	Pass
Liebherr Container Cranes	e-RTG	Pass
Terex Port Solutions	E-RTGs	Fail: Not available
Kalmar	E-One2 Zero Emission RTG	Pass
Passenger/Shuttle Buses		
BYD Motors	C6 23-Ft Zero-Emission Electric Motor Coach	Pass
BYD Motors	K7M 30-Ft All Electric Zero-Emission Transit Bus	Pass
BYD Motors	K9S 35-Ft Zero-Emission Transit Bus	Pass
BYD Motors	K9M 40-Ft All Electric Zero-Emission Transit Bus	Pass
BYD Motors	C9 40-Foot Zero-Emission Electric Motor Coach	Pass
BYD Motors	C10M 45-Ft Articulated All Electric Coach	Pass
GreenPower	EV350 40-Foot All Electric	Pass
GreenPower	EV550 40-Foot All Electric Double Decker Bus	Pass
GreenPower	SYNAPSE 72 All Electric Shuttle Bus	Pass
GreenPower	EV STAR	Pass
International IC Bus	IC charge All-Electric Bus	Fail: Not available
Mercedes-Benz	eCitaro	Fail: not in US market
Motiv Power Systems	EPIC 4 Passenger Bus	Pass
Motiv Power Systems	EPIC 6 Passenger Bus	Pass
New Flyer	Xcelior XE 35 Bus with Lithium-Ion Battery Pack	Pass
New Flyer	Xcelior XE 40 Bus with Lithium-Ion Battery Pack	Pass
Phoenix Motorcars	(ZEUS) Zero Emissions Utility Shuttles	Pass
Proterra	Catalyst FC 35-Foot Urban Transit Bus	Pass
Proterra	Catalyst XR 35-Foot Urban Transit Bus	Pass
Proterra	Catalyst E2 35-Foot Urban Transit Bus	Pass
Proterra	Catalyst FC 40-Foot Urban Transit Bus	Pass

Make	Model	Commercial Availability
Proterra	Catalyst XR 40-Foot Urban Transit Bus	Pass
Proterra	Catalyst E2 40-Foot Urban Transit Bus	Pass
Solaris	Urbino 8 LE Electric Bus	Fail: not in US market
Solaris	Urbino 9 LE Electric Bus	Fail: not in US market
Solaris	Urbino 12 LE Electric Bus	Fail: not in US market
Toshiba	Sora FC EV Bus	Fail: not in US market
VDL Bus & Coach	Citea SLF-120 Electric Bus	Fail: not in US market
VDL Bus & Coach	Citea SLF-121 Electric Bus	Fail: not in US market
VDL Bus & Coach	Citea LLE - 99 Electric Bus	Fail: not in US market
Zenith Motors	Electric Mini Bus	Pass
Drayage Trucks		
BYD Motors	8TT Battery-Electric Truck	Pass
Efficient Drivetrains Inc	Battery-electric Class 8 truck	Fail: not available
Efficient Drivetrains Inc	Plug-in Hybrid Class 8 truck	Fail: not available
Kenworth	ZECT T680 Hydrogen Fuel Cell	Fail: not available
Kenworth	PHET with CNG range extender	Fail: not available
Hydrogenic/Siemens	Fuel cell range extended truck	Fail: not available
Nikola	Nikola One	Fail: not available
Toyota	Electric Class 8 Truck- Hydrogen Fuel Cell	Fail: not available
TransPower	ElecTruck	Fail: not available
Transpower	ElecTruck with fuel cell range extender	Fail: not available
Transpower/Peterbilt	Battery-electric Class 8 truck	Fail: not available
US Hybrid	Electric Class 8 Truck- eTruck	Fail: not available
US Hybrid	Electric Class 8 Truck - H2Truck	Fail: not available
Volvo	Plug-in hybrid Class 8 truck	Fail: not available
Volvo	VNR Class 8 Electric truck	Fail: not available

Source: GNA (2019) Table 4

GNA determined that five yard tractor models are represented by manufacturers as being commercially available (Table CFASE -10a). They point out that BYD's 8TT model is actually an on-road truck and that the appropriate yard tractor model would be the 8Y, and that the two Orange EV models are the same basic tractor, one being a re-power and the other a new build. Accordingly, there are essentially three commercially available, zero-emission yard tractors: BYD 8Y, Kalmar T2E, and Orange EV T-Series. GNA further evaluated the suitability of those three models and determined that none of these models demonstrated the ability to complete two consecutive shifts in marine terminal operations without requiring an intermediate charge between first and second shifts (Table CFASE-10b), and that the operational feasibility of such a charging event was uncertain. This, as well as other operational issues, needs to be resolved in demonstration testing, meaning that these three models are not yet ready for large-scale deployment. As described in Master Response 2: Zero- and Near-Zero-Emission Technologies, further testing, which is underway at several San Pedro Bay marine terminals, is needed to establish the operational viability of battery-electric yard tractors (the only zero-emission technology currently available for yard tractors).

Table CFASE-10b. Estimated Shift Capacity for Battery-Electric Yard Tractors

Model	BYD 8Y	Kalmar T2E	Orange EV
Basic Specifications	**Yes**	**Yes**	**Marginal** (top speed)
Standard 2-shift Endurance	**Marginal** (single charge) **Yes** (inter-shift charge)	**Marginal** (single charge) **Yes** (inter-shift charge)	**No** (single charge) **Yes** (inter-shift charge)
Extended 2-shift Endurance	**No** (single charge) **Yes** (inter-shift charge)	**No** (single charge) **Marginal** (inter-shift charge)	**No** (single charge) **No** (inter-shift charge)
3-Shift Endurance	**No**	**No**	**No**

Source: GNA 2019

The commenter states that there are "Zero Emission Yard Tractors currently available that can meet all short-haul requirements…by 2019". Because yard tractors, as off-road vehicles, are not used for short-haul applications (i.e., short trips outside the terminal), that portion of the comment (CFASE-10 item b) is not relevant to the Revised Project and requires no further response.

Response to Comment CFASE-11

The commenter suggests a monetary penalty or fee for failure to comply with a mitigation measure. CEQA does not mandate specific requirements for the program, but rather provides substantial flexibility to lead agencies, such as LAHD, to adopt monitoring and reporting programs and tailor them to specific projects. Enforcement mechanisms, such as penalties, are not required by CEQA to be part of the program. The LAHD does not agree that a penalty for non-compliance with the schedule would be effective mitigation designed to minimize the Revised Project's significant environmental impacts (Public Resources Code §§ 21002.1(a), 21100(b)(3).) Providing a penalty could encourage non-compliance with the mitigation measures, as an operator could opt to pay the penalty rather than comply with the mitigation measure. Per CEQA, LAHD will adopt a mitigation monitoring and reporting program designed to ensure compliance with mitigation measures during the implementation of the Revised Project. Nonetheless, for non-CEQA purposes, the comment is noted and is hereby part of the Final EIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project. Please see Response to Comment CFASE-9 for more information on how LAHD implements mitigation measures on container terminal projects by including them in leases with its tenants.

Although the commenter has recommended a calculation method to impose penalties for non-compliance with the measure's schedule at $100 per container lift, the commenter provides no data or evidence to support how this monetary contribution is proportional to the environmental impact resulting from failure to comply with schedule. The commenter also recommends that 50% of the funds should go towards a POLA fund for "New Yard Tractor purchases", which is undefined by the commenter and currently does not exist at the Port, and 50% towards the Harbor Community Benefit Foundation (HCBF) for off-port community environmental impacts.

With respect to the HCBF, please see Response to Comment CFASE-14.

Response to Comment CFASE-12

The commenter states that there are "Near-Zero Emission Cargo-Handling Equipment (CHE) currently available that exceed Tier 4 Final Off-Road Engine standards that can meet all requirements…by 2019" and refers to "CFASE Attachment." It is unclear which, among the 400-plus models in the attachment, are meant to represent near-zero-emissions models exceeding Tier 4 requirements, and without specific details, no further analysis is possible. Please note, however, that MM AQ-17 accommodates and encourages, through the emission standards in the measure, the use of near-zero-emission CHE. Specifically, the requirements for top handlers, RTGs, and yard tractors in MM AQ-17 ensure that the CS Terminal will, in the short term, utilize near-zero-emission units in terminal operations.

The LAHD agrees with the statement that "Zero Emission Cargo Handling Equipment (CHE) currently available that can meet all requirements requirement by 2019," although only with respect to RTGs, small-capacity forklifts, and shuttle buses. As the GNA analysis shows (GNA, 2019), there are no available zero-emission top handlers, large-capacity (18-ton) forklifts, or street sweepers; note, too, that the remaining CHE types on the attachment, such as straddle cranes, shuttle carriers, rail-mounted gantry cranes, and reach stackers, are not relevant to the CS Terminal. Table CFASE-10a, above, shows the available zero-emission RTGs, forklifts, and shuttle buses.

As the GNA analysis indicates, electric RTGs (ERTGs) are widely available and need only a suitable terminal configuration (long rows of container stacks) and electrical infrastructure to be feasible (see Master Response 2: Zero- and Near-Zero-Emission Technologies for more detail). In the case of the CS Terminal, the Recirculated DSEIR (pp. 2-19 – 2-20) explains that a portion of the terminal is already suitably configured for ERTGs, whereas the remainder of the terminal has short container stack rows, which makes the deployment of ERTGs inefficient.

Numerous zero-emissions forklifts are listed in the CFASE attachment. However, the GNA analysis (GNA, 2019) showed that only a few models are suitable for marine terminal applications because most of the listed models either have inadequate capacity (less than 5 tons) or have other design constraints. GNA did identify seven small-capacity (up to 10 tons) models that could be suitable and that are commercially available (Table RTC CFASE-10a); three other models could not have their availability confirmed and GNA concluded that they are unavailable.

The CFASE attachment lists 43 models of shuttle buses represented by the list's title to be zero-emissions technology. Some did not pass GNA's preliminary screening because they were too large for container terminal use (GNA, 2019). Of the remaining 31 models (Table RTC CFASE-10a), 22 were found to be commercially available. Six other models could not have their availability confirmed and GNA concluded that they are unavailable. GNA further screened the available shuttle buses to identify models in the shorter lengths optimal for container terminal operations (maneuverability and passenger capacity of 12-20 are preferred). They found three such models, all of which had sufficient range and charging profiles to be suitable, and the LAHD accordingly concludes that the technology is feasible for deployment. GNA observed that the purchase price of the three models ranges from $230,000 to $325,000, three to four times CARB's estimate for a baseline-model shuttle bus. That means that the incremental cost of replacing WBCT's three shuttle buses would exceed $500,000 and could approach $1 million.

The Revised Project incorporates zero- and near-zero-emissions technologies for RTGs, forklifts, and shuttle buses to the extent feasible. Specifically, MM AQ-17 requires that the CS Terminal deploy zero-emission technology for shuttle buses and small-capacity forklifts because those are technologically feasible and commercially available. In the case of RTGs, MM AQ-17 requires that zero-emission units be deployed in that portion of the terminal for which they are suited and that near-zero-emission units (i.e, hybrid units) be deployed in the remainder of the terminal.

The LAHD disagrees with the statement that "there are Zero Emission Yard Tractors currently available that can meet all port and railyard requirements by 2019". Please see Response to Comment CFASE-10, and Master Response 2: Zero-and Near-Zero Emission Technologies for a detailed analysis of the feasibility of the yard tractor models listed in the CFASE attachment. Please note, too, that by requiring low-NO_X and Tier 4 engines, MM AQ-15 phases in near-zero-emission yard tractors.

Response to Comment CFASE-13

The commenter suggests a monetary penalty or fee for failure to comply with a mitigation measure. CEQA does not mandate specific requirements for the program, but rather provides substantial flexibility to lead agencies, such as LAHD, to adopt monitoring and reporting programs and tailor them to specific projects. Enforcement mechanisms, such as penalties, are not required by CEQA to be part of the program. The LAHD does not agree that a penalty for non-compliance with the Schedule would be effective mitigation designed to minimize the Revised Project's significant environmental impacts (Public Resources Code §§ 21002.1(a), 21100(b)(3).) Providing a penalty could encourage non-compliance with the mitigation measures, as an operator could opt to pay the penalty rather than comply with the mitigation measure. Per CEQA, LAHD will adopt a mitigation monitoring and reporting program designed to ensure compliance with mitigation measures during the implementation of the Revised Project. Nonetheless, for non-CEQA purposes, the comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project. See Responses to Comments CFASE -9 and CFASE -11.

Response to Comment CFASE-14

The commenter states that offset credits coordinated with the California Air Resources Board or another appropriate entity are an unacceptable form of mitigation for the GHG impacts of the Revised Project. With respect to the comment that LAHD failed to conduct a survey of available mitigation technology, the Recirculated DSEIR cites (e.g., pp. 2-17 and 2-21), and relies on, the analysis of current emissions reduction technologies contained in Strategy 1 (Clean Vehicles and Equipment Technology and Fuels) of the 2017 CAAP. That analysis concludes that most of the zero-emissions and near-zero-emissions technologies and concepts being tested, developed, or promoted are not yet practicable for application to the maritime goods movement; recent technology reviews (POLA & POLB, 2018 and 2019; Tetra Tech/GNA, 2019a, b; GNA, 2019) confirm those conclusions (see Master Response 2: Zero-and Near-Zero-Emission Technologies for additional detail on the current status of zero-emission technologies). Accordingly, the technologies and standards included in the Recirculated DSEIR represent the currently available, feasible, CARB-certified technologies, consistent with CEQA requirements. Lease Measure LM AQ-1 commits the CS Terminal and the Port to reviewing and implementing new, cleaner technologies into terminal operations as they are proven and become commercially available, consistent with the goals of the 2017 CAAP, and Lease

Measure LM AQ-3 commits the terminal to conducting a demonstration of zero-emissions cargo-handling equipment, consistent with the goals of the 2017 CAAP.

With respect to the comment that mitigation funds should be provided to the Harbor Community Benefit Foundation for projects to reduce GHG impacts off-port property, the commenter provides no evidence or data that providing offset credits to the California Air Resources Board or another appropriate entity for GHG-reducing projects and programs on Port of Los Angeles property would be insufficient to mitigate the GHG impacts of the Revised Project. Furthermore, GHG emissions are a global level cumulative impact, not a localized impact. Accordingly, reduction of GHG emissions through mitigations focused on on-site sources would be as effective to reduce overall GHG cumulative impact of the Project as off-site mitigation measures, which, as explained below, the LAHD may not be able to implement. With respect to the off-port impacts mentioned in the comment, please note that the State Lands Commission has informed the Harbor Community Benefit Foundation that, "a legal justification must be carefully considered before the Port makes an expenditure of Public Trust funds from the Port Community Mitigation Fund" (letter from J. Lucchesi, SLC, to M. Reese, HCBF, December 6, 2017). Accordingly, the LAHD considers that no further response related to that issue is required.

With respect to the amount of the GHG funding, the comment gives no indication as to why the proposed amount of $250,000 is "inadequate" and how the appropriate amount to "mitigate the GHG Environmental and Public Health Impacts" of the Revised Project would be calculated. Furthermore, the demand for a study to determine costs for mitigation is too vague to justify a more detailed response. It is important to point out that the commenter incorrectly identifies the GHG Credit Fund as a mitigation measure. This measure is not required under CEQA to mitigate an identified impact but rather is proposed as a lease measure in the Recirculated DSEIR for the purposes of establishing a Greenhouse Gas Credit Fund to offset costs for GHG-reducing projects and programs on Port of Los Angeles property. Please note, however, that the lease measure (LM GHG-1) has been revised in the Final SEIR (see Chapter 3), substantially raising the amount of funding. The fund contribution amount is now based on the calculated maximum annual emissions of GHGs above the significance threshold and the current (2019) market value of carbon credits as established by CARB. As described in the measure, that calculation results in a payment of $250,000 per year for eight years, for a total contribution of $2 million. The measure has also been modified to incorporate a firm implementation schedule. Accordingly, the LAHD concludes that no further response is required.

Response to Comment CFASE-15

With respect to the availability of the technologies referred to in the comment, please see Response to Comment CFASE -14.

The request for quarterly reviews of current technology envisions a level of effort that would represent an inefficient use of public resources, given the current pace of zero-emission technology development. Furthermore, such a survey would be ineffective mitigation for a single project; instead, the LAHD believes that the periodic technology reviews provided through the CAAP updates and LM AQ-1 are the appropriate format for the information the commenter is seeking.

The comment concerning the LAHD's feasibility assessments is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment CFASE-16

The comment that LM AQ-2 is "acceptable" is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

Response to Comment CFASE-17

See Master Response 2: Zero- and Near-Zero-Emission Technologies and Responses to Comments CFASE-14 and CFASE-15.

The comment's wording implies that the goals suggested in the comment (25% by 2020, 50% by 2023, 100% by 2025) are those of the CAAP, but that is not the case. As stated in the 2017 CAAP (p. 24), "the [Sustainable City pLAn] seeks to increase the percentage of Port-related goods movement trips that use zero-emissions technology to at least 15% by 2025 and 25% by 2035...On June 12, 2017, the Mayors of the cities of Los Angeles and Long Beach publicly signed a joint declaration affirming the commitment to move toward zero emissions at the Ports, including setting goals of zero-emission cargo-handling equipment by 2030 and zero-emission drayage trucks by 2035."

Response to Comment CFASE-18

The Recirculated DSEIR considered the impacts of truck trips associated with the Revised Project between the CS Terminal and the first point of rest (for import cargo, typically a near-dock or off-dock railyard, a distribution warehouse, a peel-off yard, or a transloading facility). Accordingly, the SEIR does consider the impacts of project-related trips to those types of facilities that are included in the commenter's list of destinations (and the attachment identifying specific businesses operating those destinations), and the mitigation measures in the SEIR address those impacts. However, the other facilities in the list, such as truck, chassis, and other equipment storage and maintenance facilities, truck fueling stations, container storage yards, fumigation facilities, and inspection points, represent facilities that are owned and operated by third parties, are not a part of the Revised Project, and are presumed to have undergone the appropriate environmental reviews and approvals. Accordingly, the truck trips generated by those operations are not evaluated in the SEIR.

Response to Comment CFASE-19

With respect to the freight transportation list and the Harbor Benefit Foundation issue, see Responses to Comments CFASE-18 and CFASE-14.

With respect to the port projects list, the comment lists 21 Los Angeles projects and 13 Long Beach projects, whereas the Recirculated DSEIR (Table 4-1) considers 39 Los Angeles projects, 7 Long Beach projects, and one joint LA-LB project. Eight of the Los Angeles projects included in the commenter's list were not included in the Recirculated DSEIR for the following reasons: 1) as of June 2017, when the cumulative projects list for this SEIR was developed, the Vopak and Nustar MOTEMS projects were on hold, as is still the case; 2) the commenter provides no information on the "Harbor Boulevard Roadway Improvements Project" so it is unclear where on Harbor Boulevard that project is located and whether it is ongoing or even a Port project; 3) the Removal of USTs at Cabrillo Marina was a one-time project completed in June 2017 and was determined to have no effect on potential cumulative impacts related to this SEIR; 4) the Wilmington Marina Parkway was a past project (2013) that was determined to have no effect on potential cumulative impacts related to this SEIR; 5) the Berths 177-178 Transit Shed Demolition Project is a past project to address fire damage that occurred in 2014 and was

determined to have no effect on potential cumulative impacts related to this SEIR; 6) the US Navy Commissary Building Demolition Project is a past project (2014) to address building fire/life safety concerns and was determined to have no effect on potential cumulative impacts related to this SEIR; and 7) the John S. Gibson Blvd Port Development Truck Parking Center is no longer a reasonably foreseeable project.

For Long Beach, the comment lists five MOTEMS projects that are not on the Port of Long Beach's development list of projects or on the list of CEQA projects (see the Port's website under the Environment tab), while the remaining eight projects in the commenter's list are included in Table 4-1 of the Recirculated DSEIR; accordingly, the LAHD concludes that the list of projects considered in the SEIR's cumulative analysis is based on the most current and available information at the time of the analysis. Because the commenter does not identify any other specific deficiencies in the cumulative analysis, no further response is required (PRC 21091(d); CEQA Guidelines Section 15204(a)).

Response to Comment CFASE-20

It is unclear whether the comment proposes "alternative electric rail transportation technologies" as a project alternative or as a mitigation measure. If as an alternative, please note that, as stated in Section 1.7 of the Recirculated DSEIR, "a supplemental EIR is not required to consider alternatives to a component of the project. Rather, the alternatives analysis in the 2008 EIS/EIR appropriately considered alternatives to the project as a whole. The proposed modifications to the mitigation measures in the Revised Project do not change the Approved Project as a whole and do not require that an alternative be developed that specifically addresses those particular modifications."

If as a mitigation measure, the construction of an electrified container movement system of the sort referred to in the comment is not feasible for consideration as mitigation for the impacts of the Revised Project. As described in more detail in Master Response 2: Zero- and Near-Zero-Emission Technologies, these systems require very large capital investments, have extensive geographical coverage, fall under the purview of railroad companies, and are disproportionate to the impacts of an individual project. In 2008, EMMI Logistics estimated the building cost for a complete MagLev system at 4.4 billion dollars (by 2013), which is likely underestimated at this point in time (American Maglev Inc., 2008). Although LAHD can authorize additional loading tracks at on-dock yards within the Port boundaries, the alternative rail transportation system would have to extend well beyond the on-dock yards to areas beyond the Port's sole jurisdiction.

Such a measure would also require a substantial reorganization of the regional goods movement system, besides having widespread construction-related impacts of its own. A zero-emissions rail transportation system may be implemented by the goods movement industry, including the ports, in the future if it proves to be technologically and operationally feasible, practicable to build (considering jurisdictional, environmental, cost, and land use issues), and economically feasible to operate. The ports have participated in the evaluation of a number of zero-emissions container movement systems concepts, including the two mentioned in the comment (see the "Roadmap for Moving Forward with Zero Emission Technologies at the Ports of Los Angeles and Long Beach" [POLB and POLA, 2011]). Although they have concluded that there are no zero-emissions solutions for locomotives and rail transportation as a whole that can be implemented in the near term, they continue to be engaged in the identification, evaluation, and demonstration of zero-emission rail options, as set forth in the 2017 CAAP.

Finally, the "comprehensive technology survey of…Zero Emission Electric Train Technologies" referred to in CFASE's comment letter appears to be the attachment considered in Responses to Comments CFASE-10 and CFASE-12. That attachment does not contain any of the advanced technologies discussed in the comment and in this response, but instead lists conventional European and Asian electric locomotives.

Response to Comment CFASE-21

The LAHD disagrees with the comment's claims that 1) "there are numerous feasible technologies that can reduce air quality significant impacts that you are not including in the project or as proposed Mitigation Measures" and 2) "All referenced technologies are commercially available today and can be ordered with delivery within one year…" Please see Master Response 2: Zero- and Near-Zero-Emission Technologies for a detailed discussion of the feasibility and availability of such technologies. Please note that the terms Best Available Control Technology and Best Available Retrofit Technology are applicable only to stationary sources such as power plants, refineries, and chemical plants, and do not apply to the mobile sources that generate virtually all of the emissions from the CS Terminal's operations. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment CFASE-22

Please see the response to comment CFASE-21.

Response to Comment CFASE-23

Please see Master Response 2, and response to comments CFASE-4, CFASE-10 and CFASE-12.

Response to Comment CFASE-24

Please see response to comments CFASE-14 and CFASE-18.

2.3.2.5 Central San Pedro Neighborhood Council

(2 of 3)

Harbor Administration Building
425 S. Palos Verdes Street
San Pedro, California 90731
Commissioner@portla.org

CITY OF LOS ANGELES BOARD OF HARBOR COMMISSIONERS
NEIGHBORHOOD COUNCIL SPEAKER REQUEST FORM

I, James Allen (President Name/Designee) declare that I am the President/Designee, respectively of the Central San Pedro Neighborhood Council (NC) and that on 11/13/18 (date adopted), a Brown Act noticed public meeting of this NC was held.

With a quorum of 13 (number) Board members present, the following vote was adopted on the Subject Matter of China Shipping SEIR (General/Agenda Item No.). The NC's position on the matter in question is:

- ☐ For
- ☐ Against
- ☐ Abstained

ATTACH THE APPROVED RESOLUTION/MOTION

The Neighborhood Council's representative shall provide the Board with a copy of the Neighborhood Council's Resolution/Motion.

IN WITNESS of the above action, the undersigned has executed and delivered this certificate in the name and on behalf of the Central San Pedro (NC Name) and as of the date set forth below.

Alexander Hall

Signature of NC President/Designee

Print Name: Alexander Hall

Date: 11/14/18

For Harbor Department Commission Office Use Only:

Board Meeting Date: _____ Name of Speaker: _____

General/Agenda Item No. _____ Notes: _____

Method Received _____

*See Attachment

CeSPNC Port Committee resolution Oct. 2018 passed by vote 11/13/18

The Central San Pedro Neighborhood Council has significant concerns over the China Shipping SEIR, and for the previous lack of oversight regarding the court ordered mitigations.

CSPNC-1 We join with the NRDC in calling for "new mitigation monitoring and reporting plan with public disclosure of the status of all mitigation measures for all past and present POLA CEQA projects."

We believe reasonable minds would support a these actions to the DSEIR to the effect as the following:

CSPNC-2

- Identify and define the failures that resulted in the non-compliance with the Port of Los Angeles Mitigation Monitoring and Reporting Program Port of Los Angeles Master Plan Update, Program Environmental Impact Report

CSPNC-3

- State the corrective actions completed and to be completed to ensure compliance with EIR defined Mitigations Port-wide.
- State the corrective actions completed and to be completed to ensure compliance with the referenced Mitigation Monitoring and Reporting Program
- Develop and implement a public process wherein EIR defined Mitigations are presented in a yearly public meeting.
- Develop and implement a public process wherein the Mitigations specifically related to ADP No. 110518-060/SCH No. 2012071081 are presented in a yearly public meeting.

The actions we are asking for are these:

CSPNC-4

- Develop and implement a public committee and meeting venue in accordance with the Brown Act to allow for objective oversight of Port compliance with the California Environmental Quality Act through inclusion of the following specifically assigned representatives knowledgeable and responsible for the subjects to be discussed:
    1. Port staff with the technical knowledge to discuss impacts, technologies, operations etc.;
    2. South Coast Air Quality Management representative;
    3. California Air Resources Board representative;
    4. US Environmental Protection Agency representative;
    5. Industry representatives as subject matter experts that may be required for the varying subjects to be discussed (e.g., engine manufacturers, fuel distributors, etc.);
    6. Community representatives assigned by recognized agencies such as the City of Los Angeles Neighborhood Councils in closest proximity to the ports.

Thank you for your consideration to act on the above items and for your timely response to these matters of great significance to communities of the Greater Los Angeles Harbor area.

Sincerely,

Alex Hall, President of Central San Pedro Neighborhood Council

Response to Comment CSPNC-1

For a discussion on the disclosure of mitigation measures for the Revised Project, please see Master Response 4: Non-Compliance with Original FEIR Mitigation Measures. As to the disclosure of the status of all mitigation measures for Port CEQA projects, this is not a comment on the adequacy of the Recirculated DSEIR. Development of an MMRP to oversee and disclose CEQA compliance for all Port projects is outside the scope of this SEIR and is not required by CEQA. CEQA requires that a lead agency adopt a program for monitoring and/or reporting to ensure that mitigation measures imposed for a particular project are implemented in accordance with the program and by the responsible entities that are identified.

As part of the Final SEIR, an MMRP will be developed for the Revised Project. CEQA does not mandate specific requirements for the program, but rather provides substantial flexibility to lead agencies, such as LAHD, to adopt monitoring and reporting programs and tailor them to specific projects. The MMRP for the Revised Project will specify, at a minimum, the requirements of each mitigation measure, the timing of when the measure is required to be implemented, the responsible party for carrying out the measure, the responsible party for monitoring and oversight of the mitigation measure, and the applicable reporting requirements of the mitigation measure such as annual reports to the Board to disclose the status of mitigation measures. There is no requirement under CEQA that the lead agency must compile or publish any compliance report from its oversight of the mitigation monitoring and reporting program. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)). Nonetheless, for non-CEQA purposes, the comment is noted, is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

Comment Number: CSPNC -2

This is not a comment on the adequacy of the Recirculated DSEIR. The MMRP prepared for the Port of Los Angeles Master Plan Update Program EIR (LAHD, 2013a) was designed to assess, at a program level, the environmental impacts of a long-range plan to establish policies and guidelines for future development at the Port. LAHD uses the Master Plan Update Program EIR's program-scale analysis to focus project-specific CEQA review for appealable/fill projects, including certain major terminal developments, and recommending mitigation measures identified in the Master Plan Update Program EIR MMRP that are appropriate and specific to those individual projects. As such, the MMRP for the Port Master Plan Update was not intended to serve as port-wide mitigation requirements for all POLA CEQA projects but rather is implemented at the individual project level, as appropriate (see page 1-2 of the Port Master Plan Update MMRP for further details). Discussion of mitigation measures and other pollution-reduction actions for Port projects other than the Revised Project is outside the scope of this SEIR and is not required by CEQA. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Comment Number: CSPNC -3

This is not a comment on the adequacy of the Recirculated DSEIR. Please see Responses to Comments CSPNC-1 and CSPNC-2. Discussion of mitigation measures and other pollution-reduction actions for Port projects other than the Revised Project is outside the

scope of this SEIR and is not required by CEQA. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Comment Number: CSPNC -4

This is not a comment on the adequacy of the Recirculated DSEIR. See Response to Comment CSPNC-1. Formation of a committee to oversee CEQA compliance for all Port projects is outside the scope of this SEIR and is not required by CEQA. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

2.3.2.6 Coastal San Pedro Neighborhood Council

Doug Epperhart
President
Dean Pentcheff
Vice President
Shannon Ross
Secretary
Louis Dominguez
Treasurer

COASTAL SAN PEDRO NEIGHBORHOOD COUNCIL

October 29, 2018

City of Los Angeles Harbor Department
Christopher Cannon, Director
Environmental Management Division
P.O. Box 151 San Pedro CA 90733-0151
ceqacomments@portla.org

Subject: Berths 97-109 [China Shipping] Container Terminal Project (SCH#2003061153) Comments Submittal

To whom it may concern,

For the Subject Project and for the failure to comply with the mitigations defined in the respective Year 2008 Environmental Impact Report for the China Shipping Project, please respond to the following recommendations.

CoSPNC-1 1) State the cause of the Port's management or system failure that resulted in the State Tidelands tenant violation of the referenced 2008 EIR and state the correction(s) that will preclude a repeat failure to comply with required environmental mitigations by Port tenants.

CoSPNC-2 2) As emissions of carbon monoxide, nitrogen oxides, and volatile organic compounds will be significant over multiple years, state the actions to reduce emissions of the listed pollutants elsewhere in the Port to ensure no net increase in the respective emissions and to remain consistent with the San Pedro Bay Ports Clean Air Action Plan.

CoSPNC-3 3) As cancer risks would be significant for residential, sensitive, and occupational receptor types, state the actions to reduce cancer risk elsewhere in the Port to ensure no net increase in the respective cancer risks and to remain consistent with the San Pedro Bay Ports Clean Air Action Plan.

CoSPNC-4 4) State the expected date (or time period) when the new lease amendment is expected to be filed.

Sincerely,

Douglas Epperhart

Doug Epperhart
President
On behalf of the Coastal San Pedro Neighborhood Council Board

Response to Comment CoSPNC-1

Please see Master Response 4: Non-Compliance with Original FEIR Mitigation Measures. This is not a comment on the adequacy of the Recirculated DSEIR. Please note that sections 1.2.3 and 1.2.4 of the Recirculated DSEIR already describe in adequate detail the background of the Revised Project, including the status of the lease with China Shipping and the reasons why some mitigation measures were not complied with.

Per CEQA, LAHD will adopt a mitigation monitoring and reporting program designed to ensure compliance with mitigation measures during the implementation of the Revised Project. CEQA does not mandate specific requirements for the program, but rather provides substantial flexibility to lead agencies, such as LAHD, to adopt monitoring and reporting programs and tailor them to specific projects. There is no requirement under CEQA that LAHD must provide a full public accounting of past activities at the Project site. Nonetheless, for non-CEQA purposes, the comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

Response to Comment CoSPNC-2

Please note that both the 2008 EIS/EIR and the Recirculated DSEIR identified significant air quality impacts, and that CEQA does not require impacts to be reduced to below baseline levels. Furthermore, the 2017 CAAP does not include a policy of no net increase; instead, it seeks to minimize air quality impacts of port operations through the implementation of all feasible control measures. The comment does not reference any specific section of the Recirculated DSEIR; therefore, no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment CoSPNC-3

Please note that both the 2008 EIS/EIR and the Recirculated DSEIR identified significant impacts related to health risk, and that CEQA does not require impacts to be reduced to below baseline levels. Furthermore, the 2017 CAAP does not include a policy of no net increase in health risks and allows the Board of Harbor Commissioners discretion when considering projects for which cancer risk exceeds 10 per million (see POLB and POLA, 2011, p. 26). The comment does not reference any specific section of the Recirculated DSEIR; therefore, no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment CoSPNC-4

As mentioned in the Recirculated DSEIR (Section 2.5.2.1), the uncertainty in the timing of mitigation measures reflects the uncertainty in the time needed to certify the Final SEIR and negotiate and execute a new lease. A new lease or lease amendment cannot be executed until the Final SEIR is certified, and since that timing is unknown, it is not possible to provide a date for lease execution. However, the time period is assumed to be 2019 for analysis purposes only in order to disclose the potential environmental impacts of the Revised Project and the earliest possible timing of when certain mitigation measures can be imposed.

2.3.2.7 Natural Resources Defense Council et al.

& San Pedro and Peninsula Homeowners' Coalition
San Pedro Peninsula Homeowners United
Urban and Environmental Policy Institute, Occidental College

City of Los Angeles Harbor Department
Christopher Cannon, Director
Environmental Management Division
P.O. Box 151
San Pedro, CA 90731
ceqacomments@portla.org
Via Email and U.S. Mail

November 16, 2018

Re: Recirculated Draft Supplemental Environmental Impact Report – Berths 97-109 [China Shipping] Container Terminal Project

Dear Mr. Cannon,

On behalf of the Natural Resources Defense Council, San Pedro and Peninsula Homeowners' Coalition, San Pedro Peninsula Homeowners United, Coalition for Clean Air, East Yard Communities for Environmental Justice, Long Beach Alliance for Children with Asthma, and Urban & Environmental Policy Institute, Occidental College, we provide comments on the Recirculated Draft Supplemental EIR for Berths 97-109, China Shipping Container Terminal (RDSEIR).

NRDC-1

On September 29, 2017, we submitted comments on the Draft Supplemental EIR (DSEIR). These comments are directed to the RDSEIR and, accordingly, refer to and incorporate our September 29, 2017 comments where appropriate. We specifically request that our September 29, 2017 comments and all attachments to those comments be included in the administrative record for this project.[1]

[1] These comments do not address the Port's violations of the 2004 Amended Stipulated Judgment (the Amended Stipulated Judgement or ASJ). *NRDC et al. v. City of Los Angeles et al.*, No. BS 070017 (Cal. Sup. Ct. June 14, 2004) (Amended Stipulated Judgment, Modification of Stay, and Order thereon). All signatories to this letter who were parties or members of parties

Our written comments below are organized as follows:

EXECUTIVE SUMMARY

We adopt and incorporate here the section entitled "Factual Context And Summary Of Concerns" from our September 29, 2017 comment letter on the DSEIR. We note that our concerns raised in that letter are largely unaddressed by the recirculated document, and as a result, many of our comments on the DSEIR are reiterated below and apply to the RDSEIR.

With respect to comments unique to the RDSEIR, we raise the following concerns, which are discussed in greater detail below:

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1. The RDSEIR's analysis of air quality impacts remains confusing and inadequate to inform the public of the project's impacts. The Port continues to use improper baselines and comparisons that hide (a) the full impacts of its noncompliance with the 2008 FEIR, and (b) the full impacts from the Revised Project. And the RDSEIR's air quality analysis relies on unsupportable assumptions that underestimate the Revised Project's truck and ship emissions.

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involved in the ASJ reserve all rights with respect to breaches of the ASJ, and note that the Port's obligations under the ASJ are separate from and in addition to those required under CEQA.

2. While the RDSEIR provides some data to calculate at least a part of the past and future "excess emissions" shouldered by the community, an analysis by an independent expert shows that **from 2009 to 2045, the Port's noncompliance results in excess emissions totaling at least 1,400 tons of NOx, 192 tons of VOCs, 3,623 tons of CO, 19 tons of PM 2.5, 20 tons of PM10, 25 tons of SOx, and 54 tons of DPM. And just looking at the *past* excess emissions caused by the Port's noncompliance with the 2008 EIR, local communities have *already* shouldered excess emissions totaling at least 778 tons of NOx, 82 tons of VOCs, 1,034 tons of CO, 11 tons of PM 2.5, 12 tons of PM10, 12 tons of SOx, and 18 tons of DPM. This is the equivalent of tens of millions of heavy-duty truck miles traveled—right in the communities near the Port.** These emissions have significant health impacts, ranging from aggravated asthma to cancer. Port neighbors were and continue to be exposed to a higher risk for these illnesses because of the illegal excess emissions from the China Shipping project.

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3. Despite having multiple chances to do so, the Port has failed to fully mitigate the past, current, and future emissions created by its noncompliance and the Revised Project. The Port has not shown that the mitigation measures it adopted in 2008 are now infeasible. And it has also failed to explain why the additional measures we proposed—made possible by technological advancements at other terminals, more aggressive measures the Port has required of its own tenants, the San Pedro Bay Ports' Draft Clean Air Action Plan, and the Mayors' zero emission goals—are also supposedly infeasible. These include enhanced measures for ship emissions, deploying zero emission technologies like those used to feasibly mitigate emissions at the Trapac[2] and Middle Harbor projects, taking older diesel trucks off the road and replacing them with zero emission trucks, creating mitigation funds for impacted communities, and ensuring proper oversight of mitigation for the China Shipping terminal so that noncompliance never recurs.

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In short, what we have learned from the DSEIR and RDSEIR is that there is no dispute that the Port's noncompliance with the 2008 EIR mitigation measures had significant negative impacts on the environment and local communities. Likewise, there is no dispute that the Revised Project would have additional significant impacts compared to the currently approved project, precisely because it would forego some of the mitigation measures imposed in 2008. However, the Port fails to adopt all feasible mitigation for the project's past, current, and future impacts, and thus, violates CEQA. By adopting zero emission equipment inside and outside of the fence line, the

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[2] *See, e.g.*, the Port-produced video at https://www.trapac.com/news/trapac-tomorrows-technology-today, which depicts feasible mitigation measures for intra-terminal cargo moves directly across the West Basin at the TraPac facility. There, the yard tractors and cranes that move and stack containers are zero emission and so will reduce NOx. If TraPac can operate this way under a Port of Los Angeles lease, so can China Shipping. And if China Shipping can't, despite the financial backing of the Government of China, it should be shut down. At 5:13 of this video, a China Shipping vessel can be seen at berth directly across from the TraPac site.

Port can start to mitigate the emissions that it illegally permitted to occur, but it has refused to do so.

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The Port must put an end to its years of delay on these issues. The FEIR was certified in 2008. In 2015, the Port revealed it violated pollution-cutting measures it promised to implement and committed to study and rectify the problem. It has now been three years since the Port revealed its noncompliance, and ten years since the project was approved. For more than a decade, emissions from the China Shipping terminal have been higher than they should have been. While we appreciate robust CEQA processes, this process had gone on too long. All the while, communities continue to suffer from the Port's violations while the Port operates and profits from the China Shipping terminal. And there seems to be no end in sight.

The Port must commit to finishing the CEQA process as soon as possible, and implementing the feasible mitigation measures set forth in this letter.

ERRORS IN THE RDSEIR

I. The RDSEIR's air quality analysis still violates CEQA

The fundamental goal of an EIR is to inform decision makers and the public about the environmental consequences of a project. *Communities for a Better Env't v. City of Richmond*, 184 Cal. App. 4th 70, 88 (2010). Here, the Port's air quality analysis obscures important impacts, and thus violates CEQA.

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In the DSEIR, the Port used a 2014 baseline for its air quality analysis. We explained in our prior comment letter why that baseline was illegal. Although the Port has moved the baseline to 2008, its analysis still fails to comply with CEQA. Since the approval in 2008, the Port repeatedly granted China Shipping waivers from the approved mitigation measures, meaning that local communities were subject to excess emissions in the past. Now, the Port proposes changes to the project analyzed and approved in 2008, which will subject local communities to excess emissions in the future.

Accordingly, the Port must evaluate two things in its analysis of air quality impacts: First, the Port must disclose and mitigate the *past* excess emissions that were caused by its failure to comply with the 2008 EIR mitigation measures. Second, it must analyze and mitigate the *future* emissions that will be caused by the Revised Project as compared to what would have happened under the approved project.

In short, because of the specific details of this project and its lengthy, complicated history, it is important that the Port carefully design its analysis and choose a baseline to answer those two critical questions. However, as explained below, the Port has failed to do so. The Port's failure to fully disclose, analyze, and mitigate these past and future excess emissions violates CEQA.

A. The Port must accurately account for and mitigate past excess emissions caused by its noncompliance with the 2008 EIR mitigation measures

i. Under CEQA, the Port must disclose and mitigate past excess emissions

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In the 2008 EIR and through the parties' Amended Stipulated Judgment, the Port committed to implement pollution-cutting measures for the China Shipping project. The 2008 EIR incorporated the mitigation measures that the Port agreed to in the Amended Stipulated Judgment. Those approved measures were set to phase in between 2004 and 2018.[3] In 2015, the Port revealed that it violated its commitments in the 2008 EIR and the Amended Stipulated Judgment. Only months after the Port certified the 2008 EIR, the Port began providing waivers to China Shipping, excusing it from complying with a key mitigation measure in the EIR: that a certain percentage of ships utilize shore-power. The Port also failed to enforce measures that would have further reduced pollution from ships, as well as trucks and cargo handling equipment. And even now, the Port is not in full compliance with the mitigation measures.

There is no dispute that the Port's noncompliance with the 2008 EIR mitigation measures had significant negative impacts on the environment and local communities. The Port admits as much in the RDSEIR (even though that analysis underestimates the emissions for the reasons described below, *see infra* Section I.A.ii.). Under CEQA, the Port must disclose, analyze, and mitigate these past excess emissions that were caused by the Port's violation of the 2008 EIR mitigation measures. *See Poet, LLC v. State Air Resources Board*, 12 Cal. App. 5th 52, 76 (2017) (requiring the agency to "carefully identify the informational deficit in its earlier environmental disclosure document and then show that deficit was put right").

The Port fails to do this in the RDSEIR, and instead states that any disclosure of past excess emissions is for "informational purposes only." *See, e.g.*, RDSEIR at 3.1-5. But the Port is wrong. It must catalogue and sum all excess emissions caused by cheating from all years, from when the first mitigation measures were supposed to be implemented in 2004 to the present, and offset those emissions by requiring additional mitigation measures. *See Poet,* LLC, 12 Cal. App. 5th at 81.

[3] Measures to reduce operational emissions from yard equipment were set to phase in as early as 2004 (MMAQ-15 and MMAQ-17). Port of Los Angeles, China Shipping FEIR, Transmittal 4: Berth 97-109 [China Shipping] Container Terminal Project Mitigation Measures, *available at* https://www.portoflosangeles.org/EIR/ChinaShipping/FEIR/_Mitigation_List.pdf ("FEIR Mitigation Measures"). The last measure to phase in is MMAA-20, which requires 100% LNG trucks by 2018. Port of Los Angeles, FEIR, Berth 97-109 [China Shipping] Container Terminal Project, Mitigation Monitoring and Reporting Program, at 2-13–2-20, *available at* https://www.portoflosangeles.org/EIR/ChinaShipping/FEIR/MMRP.pdf ("FEIR Mitigation Monitoring and Reporting Program").

ii. The RDSEIR fails to accurately account for past excess emissions

Although the RDSEIR purports to provide an accounting for past excess emissions for informational purposes, its analysis is fundamentally flawed and vastly understates the emissions local communities were exposed to because of the Port's noncompliance with the required mitigation measures.

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As an initial matter, the Port's evaluation of past emissions inexplicably evaluates only three years: 2012, 2014, and 2018.[4] However, the Port was in noncompliance with approved mitigation measures for many other years as well. *See* RDSEIR, Table 2-1. The Port must evaluate the impact of any noncompliance for *all* years, going back to 2000-2001, not just for 2012, 2014, and 2018. And the Port must then aggregate the amount of pollution shouldered by the local communities over those years, so that it can provide for mitigation to offset that total.

In addition to leaving out many relevant years, RDSEIR's analysis suffers from another fundamental flaw. Even for the years the RDSEIR purports to analyze, it fails to make the correct comparisons. Rather than comparing what actually happened in past years to what *should have happened* under the 2008 EIR, the Port compares what actually happened in past years[5] to the "2008 Actual Baseline." RDSEIR, Table 3.1-9. This comparison to the 2008 Actual Baseline is perplexing and fails to provide the required information under CEQA.

The 2008 Actual Baseline, as defined by the Port, is the actual conditions in 2008 (and is identical to the required mitigation scenario in that year because the Port was supposedly in full compliance with required mitigation measures that year). RDSEIR at 2-28. Thus, the only year for which comparison to the 2008 Actual Baseline is relevant is the year 2008. For other years,

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the relevant comparison is what actually happened in that year to what *should have happened* in that year.

For example, for 2012, it makes no sense to compare the actual emissions in 2012 to the actual emissions in 2008. But that's precisely what the RDSEIR does. *See* RDSEIR, Table 3.1-9. Instead, the Port should compare what actually happened in 2012 to what was required to happen in 2012 under the approved mitigation measures. That would disclose the excess emissions for

[4] It is not entirely clear, but it appears that the Port based its evaluation of 2018 on predicted actual compliance with mitigation measures. *See* RDSEIR at 3.1-6 and Table 3.1-1. Because the Port remains in noncompliance today, it must include 2018 in any calculations setting forth past excess emissions.

[5] Although the RDSEIR lists these past years under "Revised Project," we understand the data provided for past years to be actual data from those years, not an estimate of what the emissions would be under a hypothetical Revised Project in those years *See, e.g.*, RDSEIR, Tables 3.1-9, 3.1-10, 3.1-11. The Port should clarify that this is the case, and fully disentangle the concepts of past actual compliance with the future Revised Project, which has not yet been approved. As it stands now, the Port conflates these two separate inquiries.

that year. And although the Port contains an "FEIR Mitigated Scenario" showing what should have happened in each year if there had been full compliance, it compares that scenario—again, perplexingly—to the 2008 Actual Baseline. RDSEIR, Table 3.1-10. Returning to the example year of 2012, it is entirely unclear what a comparison of the 2012 FEIR Mitigated Scenario to the 2008 Actual Baseline is intended to show.

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In short, the RDSEIR fails to make the correct comparisons. It compares past years' actual emissions to the 2008 Actual Baseline. It also compares past years' FEIR Mitigated Scenarios to the 2008 Actual Baseline. But it never directly compares past years' actual emissions to past years' FEIR Mitigated Scenarios; that is the comparison that would disclose how much additional pollution local communities suffered in those years due to the Port's noncompliance.

The problems are similar for the Port's evaluation of toxic air contaminants and cancer risk. The RDSEIR uses both a "static" 2008 baseline and a "floating" 2008 future baseline, and then compares the Revised Project and the FEIR Mitigated Scenario to those 2008 baselines. RDSEIR at 3.1-29 to 3.1-30, 3.1-39 to 3.1-40, 3.1-68 to 3.1-73. Again, neither of those baselines provides a meaningful comparison. For the Port's evaluation of past toxic air contaminants exposure and cancer risk, it is unclear why the Port is using a 2008 baseline at all, except for comparison to what actually happened in 2008. Again, the Port should compare what should have happened in past years to what actually happened in those same past years. The RDSEIR fails to make that comparison and therefore fails to satisfy CEQA.

NRDC-10

B. The Port must accurately account for and mitigate future excess emissions that would be caused by approval of the Revised Project

i. Under CEQA, the Port must disclose and mitigate the impacts of modified projects

Under CEQA, agencies must disclose, analyze, and mitigate, where feasible, all new environmental impacts caused by changes in previously approved projects. Here, the Port must compare the Revised Project to the 2000-2001 baseline or, because the project was previously reviewed and approved in 2008, at the very least, to the levels of pollution that would have occurred under the previously approved project. *See, e.g., Am. Canyon Cmty. United for Responsible Growth v City of Am. Canyon*, 145 Cal. App. 4th 1062, 1073-81 (2006). The Port does not appear to contest that it must disclose and, where feasible, mitigate the excess future emissions that would be caused by the Revised Project.

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ii. The RDSEIR fails to accurately account for future excess emissions

Although the Port concedes that it must disclose the excess emissions that would be caused by approving the Revised Project, it fails to accurately analyze those emissions. The RDSEIR commits several errors in its analysis of future emissions under the Revised Project.

Most significantly, the RDSEIR makes the fundamental error of failing to compare the correct data for future excess emissions. As explained in our September 29, 2017 letter, the Port should compare the Revised Project to a 2000-2001 baseline because that represents the period before

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the project was constructed. If, however, the Port is unwilling to compare the Revised Project to a 2000-2001 baseline, at the very least it must compare the Revised Project to the baseline of the currently approved project (which the RDSEIR refers to as the "FEIR Mitigated Scenario"). Instead, the RDSEIR compares the Revised Project to the 2008 Actual Baseline. RDSEIR, Table 3.1-9. Again, the Port provides no compelling justification for using a 2008 Actual Baseline for these comparisons, given that not all mitigation measures had phased in by 2008. The Port's use of a 2008 baseline therefore obscures impacts. In other words, the RDSEIR compares both the Revised Project and the FEIR Mitigated Scenario to the 2008 Actual Baseline (RDSEIR, Tables 3.1-9, 3.1-10), but it never compares the Revised Project directly to the FEIR Mitigated Scenario.

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The problems are similar for the Port's evaluation of toxic air contaminants and cancer risk. The RDSEIR uses both a "static" 2008 baseline and a "floating" 2008 future baseline, and then compares those baselines to the Revised Project and the FEIR Mitigated Scenario. RDSEIR at 3.1-29 to 3.1-30, 3.1-39 to 3.1-40, 3.1-68 to 3.1-73. Again, neither of these baselines provides a meaningful information. As explained above, the static 2008 baseline fails to account for the increasingly stringent mitigation measures that were set to phase in over time. And the "floating" 2008 future baseline fails for similar reasons: It does not assume implementation of the mitigation measures as required by the 2008 EIR. Rather, it apparently "incorporates the effects of existing air quality regulations" over time. RDSEIR at 3.1-30. To the extent that the mitigation measures adopted in the 2008 EIR are more stringent than existing air quality measures, the use of the "floating" 2008 future baseline hides impacts. Nonetheless, even that baseline indicates that adopting the Revised Project will have a significant impact on individual cancer risk. *See* RDSEIR, Table 3.1-18. It is highly likely there would be additional significant impacts if the correct comparison were made. *See* RDSEIR, Tables 3.1-18, 3.1-19 (showing that the impacts are nearly significant when using the "floating" 2008 future baseline).

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The RDSEIR's analysis of the impacts of the Revised Project also contains other flaws. It bases its future air quality analysis on the fiction that new lease measures will go into effect in 2019. There is no basis to assume that this will occur because China Shipping has refused every past request by the Port to revise its lease—even after receiving millions of dollars in public funds from the Port, ostensibly to ease compliance with the terms of the Amended Stipulated Judgment. Without a 2019 lease amendment date, the future projected emissions will be higher than those predicted.

NRDC-15

In addition, the RDSEIR contains dubious assumptions about the future port drayage truck fleet and ocean-going vessels. For example, the Port assumes that NOx emissions have been and will be the same for diesel and LNG trucks, contradicting published data from CARB and U.C. Riverside showing lower NOx emissions from LNG trucks, especially with the newly-certified 0.02 g/hp/hr Cummins engine. Likewise, the RDSEIR assumes that after 2023, emissions from ocean-going vessels will be the same under the Revised Project and the approved project. The Port provides no explanation for this assumption.

NRDC-16

In sum, the RDSEIR's air quality analysis underreports future air emissions from the Revised Project. But even with this underreporting, the amounts of excess air pollution that Port

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neighbors have suffered and will continue to suffer are enormous. What CEQA demands now is a set of robust mitigation measures. Under no circumstances should the Port validate its past cheating by adopting a statement of overriding considerations and ignoring existing, feasible mitigation measures.

C. Even using the incomplete data provided by the RDSEIR, it is clear that both past and future excess emissions are significant

NRDC-17

At NRDC's direction, Sustainable Systems Research, LLC (SSR), quantified the past and future excess emissions (emissions reductions lost).[6] Specifically, using the data provided in Appendix B1, SSR calculated the past excess emissions caused by the Port's past noncompliance with the 2008 EIR mitigation measures and the future excess emissions that would result from the adoption of the Revised Project. As shown by Table 1 of the SSR report, by any measure, those emissions are significant:

Table 1: Total Tons of Excess Emissions for the period from 2009 to 2045

	NO_X	VOC	CO	PM2.5	PM10	SO_X	DPM
Through the Present: 2009 to 2018							
Trucks	-	-	-	-	-	-	8
OGV	191	4	18	4	4	13	4
CHE	588	77	1016	7	7	0	5
TOTAL	**778**	**82**	**1034**	**11**	**12**	**12**	**18**
Future Years: 2019 to 2045							
Trucks	-	-	-	-	-	-	24
OGV	283	11	33	7	8	13	8
CHE	339	99	2556	2	1	0	4
TOTAL	**621**	**110**	**2589**	**9**	**8**	**13**	**36**
All Years: 2009 to 2045							
Trucks	-	-	-	-	-	-	33
OGV	474	15	51	11	12	25	12
CHE	926	177	3572	8	8	0	9
TOTAL	**1400**	**192**	**3623**	**19**	**20**	**25**	**54**
Share Emitted by 2018	**56%**	**42%**	**29%**	**55%**	**58%**	**49%**	**33%**

[6] *See* Report from Dana Rowangould, Sustainable Systems Research, LLC, "China Shipping Container Terminal: Excess Emissions from Modified FEIR Mitigations" (Nov. 14, 2018), included as Attachment K1.

SSR then illustrated the impact of those excess emissions by comparing them to equivalent emissions from coal-fired power plants, millions of truck miles traveled, or other similar figures:

- The excess NO_X emissions from 2009 through 2045 are equivalent to a typical coal-fired power plant operating for approximately 11 months.
- The excess NO_X, VOC, CO, PM2.5, PM10, SO_X, and DPM that will be emitted from 2009 through 2045 are the equivalent of:
  - 210; 700; 2,400; 140; 96; 1,500; and 520 million truck miles traveled in 2018, respectively;
  - Emissions from 56,000; 180,000; 480,000; 32,000; 21,000; 400,000; and 110,000 trucks traveling for the entire period from 2009 to 2045, respectively; or
  - 59%, 200%, 490%, 35%, 22%, 390%, and 140% of all heavy duty truck emissions occurring within the SCAB region for the entire period from 2009 to 2045, respectively.

NRDC-17

These figures—as massive as they are—still undercount the excess emissions. Because the Port did not provide data for years before 2008, SSR could not evaluate those years. So, to the extent that there was any noncompliance in earlier years, those excess emissions are not reflected here. The analysis may also undercount excess emissions because SSR based its analysis on data provided in the RDSEIR, which—as noted above—improperly assumes that LNG trucks and diesel trucks have equivalent emissions for all pollutants except diesel particulate matter, and that future ship emissions will be the same under the Revised Project and approved project scenarios. The RDSEIR also wrongly uses EMFAC emission factors for the port drayage duty cycle, which UCR showed are way off.

In sum, the SSR report confirms that the excess emissions—both from the Port's cheating in the past and from the proposed Revised Project—are significant. These air pollutants will cause serious health effects, especially for children, pregnant women, and the elderly. VOCs react with NOx to form ozone, the main ingredient in "smog." Ozone can trigger chest pain, coughing, throat irritation, and airway inflammation. Over the long term, ozone pollution can harm lung tissue and worsen bronchitis, emphysema, and asthma. Sulfur dioxide emissions can exacerbate asthma, and studies have shown a connection between short-term exposure and increased hospital visits and admissions. Sulfur dioxide can also react with other compounds to form tiny particles that penetrate deep into the lungs, and that can cause emphysema, bronchitis, and heart disease. And particulate matter can aggravate asthma and cause increased respiratory symptoms, such as irritation of the airways, coughing, and difficulty breathing. Particulate matter has even been shown to cause heart attacks, cancer, and premature death. Communities near the Port, and especially low-income communities of color, were and continue to be exposed to a higher risk for these illnesses because of the project's excess emissions.

NRDC-18

The SSR report shows that the RDSEIR's analysis of air quality impacts is patently insufficient. The past and future excess emissions are far more significant than the Port is willing to admit, and require additional mitigation measures, as discussed below.

D. The RDSEIR fails to analyze whether the Revised Project will conflict with or obstruct implementation of the 2016 AQMP

NRDC-19

The South Coast air basin is classified under the federal Clean Air Act as in "extreme non-attainment" for ozone, better known to residents of the area as smog.[7] The main precursors of ozone in the lower atmosphere are NOx and VOCs. In its 2016 Air Quality Management Plan (AQMP), the South Coast Air Quality Management District (AQMD) attempts to demonstrate to the U.S. Environmental Protection Agency (US EPA) how it intends to come into compliance by 2023, focusing on enormous reductions in NOx emissions in the region:

> The most significant air quality challenge in the Basin is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. Based on the inventory and modeling results, 522 tons per day (tpd) of total Basin NOx 2012 emissions are projected to drop to 255 tpd and 214 tpd in the 8-hour ozone attainment years of 2023 and 2031 respectively, due to continued implementation of already adopted regulatory actions ("baseline emissions"). The analysis suggests that total Basin emissions of NOx must be reduced to approximately 141 tpd in 2023 and 96 tpd in 2031 to attain the 8-hour ozone standards. This represents an additional 45 percent reduction in NOx in 2023, and an additional 55 percent NOx reduction beyond 2031 levels.[8]

As we pointed out in our earlier letter, this is an enormous challenge. The AQMP relies heavily on reducing NOx emissions from the main sources of NOx in the area: mobile sources, mostly heavy-duty trucks, that cause 88% of the NOx emissions regionally.[9] Given the projected increase in port throughput estimated in the RDSEIR, and the absence of the low-NOx LNG trucks that the Port promised to serve China Shipping, the Revised Project will make compliance with the 2016 AQMD even harder. We also note that the Port has been resistant to a proposal from South Coast concerning an indirect source rule, another way to reduce NOx emissions.

II. The RDSEIR fails to overcome the presumption that the 2008 mitigation measures are feasible, and fails to set forth all feasible measures to reduce significant operational emissions

NRDC-20

Of the 52 mitigation measures adopted in the 2008 EIR, ten mitigation measures and one lease measure have not been fully implemented. RDSEIR at Table 2-1. Of the unimplemented

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[7] South Coast Air Quality Management District, 2016 Air Quality Management Plan, Executive Summary, *available at* http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/executive-summary.pdf?sfvrsn=4 (Attachment E12). This is with reference to the 75 ppb federal NAAQS, which has since been lowered to 70 ppb.

[8] *Id.* at ES-2.

[9] *Id.* at ES-7; *see also id.* at 4-7 and Fig. 4-1.

measures, 7 apply to operational emissions. The RDSEIR seeks to modify or eliminate these air quality measures.

Under CEQA, a lead agency may not approve a project that will have significant environmental impacts unless it finds that alternatives and mitigation measures to reduce environmental impacts are infeasible based on specific economic, legal, social, technological or other considerations. Cal. Pub. Res. Code §§ 21002; 21061.1. "'Feasible' means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors." *Id.* § 21061.1.

NRDC-20

An agency may delete or modify a mitigation measure after an initial EIR is certified, but must state a legitimate reason for deleting the mitigation measure, supported by substantial evidence. *Napa Citizens for Honest Gov't v. Napa Cty. Bd. of Supervisors*, 91 Cal. App. 4th 342, 359 (2001), as modified (Aug. 7, 2001), as modified on denial of reh'g (Sept. 4, 2001). Courts will temper deference to agency decisions to delete a mitigation measure with the presumption that the mitigation measure was adopted only after "due investigation and consideration" in the initial environmental review process. *Id.* "The fact that a mitigation measure had been adopted in an earlier plan, but has been deleted, will be relevant to the question of the adequacy of the modified EIR, because it identifies a mitigation measure that the modified EIR then must address." *Id.* A mitigation measure "cannot be deleted without a showing that it is infeasible." *Id.* Finally, "the deletion of an earlier adopted measure should be considered in reviewing any conclusion that the benefits of a project outweigh its unmitigated impact on the environment." *Id.*[10] The RDSEIR fails to overcome this presumption.

Our comments in this section and the next are organized as follows: First we provide a summary of the factual record that undercuts the RDSEIR's claims that the 2008 mitigation measures are not feasible. Second, we highlight text in the RDSEIR, which seems to confirm that the 2008 mitigations are in fact feasible. Third, we explain how each of the original mitigations are feasible, and can be strengthened, as well as provide specific comments on the revised measures. Finally, we list additional measures the Revised Project should include to mitigate the project's significant operational emissions, including the excess emissions attributable to the Port's noncompliance.

[10] *Napa Citizens* was decided in the context of a land use plan, and has since been applied to all CEQA projects. *See Lincoln Place Tenants Ass'n v. City of L.A.*, 130 Cal. App. 4th 1491, 1509 (2005); *see also Katzeff v. Cal. Dep't of Forestry and Fire Prot.*, 181 Cal. App. 4th 601, 614 (2010).

A. The Port's infeasibility arguments are a litigation artifact and not supported by the record

Correspondence obtained through Public Records Act requests shows a frustrated Port and City Attorney disbelieving China Shipping's unsupported assertions that the 2008 mitigation measures were infeasible and demanding specifics, without success.

On February 17, 2015, the City Attorney wrote to counsel for China Shipping summarizing years of negotiations and specifically stating that China Shipping was "required to immediately implement" the mitigation measures identified in the 2008 EIR.[11] The City Attorney's letter contained a blunt threat:

> In the event a third party files a legal action challenging China Shipping's failure to comply with the mitigation measures, there is a strong possibility that the court will issue an order enjoining or otherwise affecting China Shipping's operations. Under California law, a court has broad authority to stop activities that it determines are against the law, are detrimental to the environment or violate a court order. These remedies are separate from and are not related to any rights or agreements between the Port and China Shipping. *The Court can issue any of these orders, including the complete shut-down of all activities at the site, without regard to the provisions of the Permit No. 999*. [Emphasis added]

NRDC-21

On February 25, 2015, China Shipping replied and claimed it was fully compliant with the mitigation measures for ships, including the AMP and VSR measures. The letter went on to provide brief unsupported assertions that "immediate" replacement of certain cargo handling equipment was not economically feasible "at this time," and generally asserted that the LNG truck measure was not economically feasible.[12]

On March 3, 2015, the City Attorney replied to the China Shipping letter[13] and pointed out that the claim of infeasibility was late in the game:

> On the overall issue of economic infeasibility, China Shipping had the opportunity to present comments and evidence of economic infeasibility of these [mitigation] measures during the environmental review process, but chose not to do so.

Nonetheless the City Attorney invited China Shipping (again) to provide information regarding infeasibility on economic grounds or otherwise if circumstances had changed. On March 25, 2015, China Shipping replied, again, with few specifics.[14] Perhaps tiring of this, on April 16,

[11] Attachment A30.
[12] Attachment A31.
[13] Attachment A32.
[14] Attachment A33.

2015,[15] June 12, 2015,[16] and October 19, 2016,[17] the City Attorney and Port wrote to China Shipping asking for more information.

On December 30, 2016, China Shipping wrote to the City Attorney and claimed that it needed more time to respond.[18] By that point, the September 18, 2015 NOP in this matter had been on the street for over a year. On January 17, 2017, the Port Executive Director Eugene Seroka again wrote to China Shipping[19] stating that:

> With respect to the SEIR, POLA has made several requests for data and information from China Shipping to assist POLA in preparation of the SEIR. To date, POLA has received only partial responses from China Shipping . . . China Shipping has not proposed any modifications to make currently required mitigation measures feasible nor provided alternative measures that could address the identified environmental impacts. This response is not satisfactory.

NRDC-21

Mr. Seroka went on to say that the Port was proposing certain changes to the mitigation measures for analysis in the SEIR, and that:

> [I]t is incumbent on China Shipping, as the tenant, to comment on the feasibility of the measures proposed. Failure to do so is solely the responsibility of China Shipping.

On January 25, 2017, China Shipping responded that it would address the SEIR and environmental matters "in the near future."[20] Based on the documents received in response to our Public Records Act Requests to the City of Los Angeles, we do not believe China Shipping ever provided Mr. Seroka with additional information demonstrating potential infeasibility. China Shipping also did not appear to have commented on the NOP for the DSEIR.[21]

These facts show a lack of substantial evidence demonstrating infeasibility, and cast the Revised Project as an attempt to rationalize the Port and China Shipping's noncompliance.

Below, in sections B though H, we further document how the 2008 mitigation measures are in fact, feasible.

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[15] Attachment A35.
[16] Attachment A62.
[17] Attachment A67 (POLA001634–35).
[18] Attachment A63 (POLA001471–74).
[19] Attachment A63 at POLA001475–81.
[20] Attachment A65 at POLA001587.
[21] DSEIR, Table 1-3 ("Summary of Key NOP Comments").

B. The RDSEIR implies that the 2008 mitigation measures are feasible by stating that if the Revised Project is rejected, the original 2008 mitigation measures will be enforced

When explaining the discretionary decision before the Board, the RDSEIR states:

> Putting aside the feasibility issues raised about these mitigation measures, if the Board does not approve the Revised Project, the original mitigation measures for air quality and greenhouse gas emissions would remain applicable to the CS Container Terminal. . . . LAHD would continue to be responsible for overseeing the Mitigation Monitoring and Reporting Program and ensuring all parties comply with the mitigation measures.

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RDSEIR at 1-36 to 1-37. The RDSEIR goes on to state that if the Board rejects the Revised Project, the Port would be responsible for enforcing the previously adopted measures in a separate proceeding. RDSEIR at 1-37.

Such statements at best confuse and at worst run counter to the RDSEIR's position that the unfulfilled measures adopted in 2008 are infeasible. Either the measures are infeasible, and cannot be implemented or enforced; or the measures are feasible, and the Board of Harbor Commissioners can move forward with the Project as envisioned in 2008 by implementing and enforcing all 52 mitigation measures certified in the China Shipping EIR.[22]

C. The 2008 AMP measure (MM AQ-9) is feasible

The RDSEIR does not overcome the presumption that the 2008 EIR's AMP measure (MM AQ-9) is feasible, and thus goes backwards for no legally valid reason. **The Port should maintain a 100% compliance rate with the Port's AMP requirement as envisioned in the 2008 EIR, and if necessary, allow vessel operators to comply with an alternative emissions control system.**

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In the 2008 FEIR, MM AQ-9 required that China Shipping ships calling at Berths 97-109 use AMP in the following percentages while hoteling in the Port.

- Jan–Jun 2005: 60%
- July 2005: 70%
- Jan 2010: 90%
- Jan 2011: 100%.

[22] We understand that if the 2008 measures are deemed technologically and operationally feasible (e.g., 100% ships can use AMP and comply with VSR), some of the deadlines for the measures have past, and would still need to be re-set.

MM AQ-9 also required that by 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at a 100% compliance rate, except for circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship.[23]

The RDSEIR's revised measure reduces the percentage of vessel calls that must comply with AMP to 95%, and provides that if one or more of several exceptions exist, vessel operators can utilize an equivalent alternative at-berth emissions control caption system if feasible in lieu of AMP. RDSEIR at 2-15.

None of the reasons cited in the RDSEIR overcome the presumption that a 100% compliance rate with AMP is feasible (we acknowledge, of course that the deadline for that compliance—2011—is no longer feasible). The explanation provided is not based on data from China Shipping or its successors that the 100% AMP requirement is infeasible for its vessel operations, and instead appears to be speculative, generalized, and provided by the Port.

As detailed in our September 29, 2017 comment letter, the Port privately granted waivers to China Shipping from the Project's AMP requirements (MM-AQ 9)—including when it served its financial interests to do so,[24] never secured an amended lease with China Shipping that included the 2008 mitigation measures, RDSEIR at 1-11, and took no action against China Shipping to enforce the mitigation measures even as deadlines came and went. It appears that measures like MMAQ-9 became "infeasible" due to the own Port's failure to timely implement and enforce them, not due to any economic, legal, social, or technological reasons. *See* CEQA Guidelines § 15091.

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Further, the RDSEIR's claim that the 100% AMP requirement should be relaxed to 95% is contrary to other port projects. For example, Middle Harbor at the Port of Long Beach has had a 100% AMP requirement since December 2014.[25] And 100% of vessel calls at the Port's Trapac

[23] FEIR Mitigation Monitoring and Reporting Program at 2-13.
[24] *See* Attachment A13 (POLA000633–34); Attachment A23 (POLA000822–23); Attachment A25 (POLA00825–26); Attachment A61 at POLA001429–30; Attachment A62 at POLA001462 (documents detailing at least five waivers granted by the Port to China Shipping from the shore-power requirements). One of the waivers was granted after China Shipping told the Port in late November 2011, that it entered a deal that would shift 800 TEUs weekly from Long Beach to Los Angeles, and to meet the volume increase, it would need to use larger vessels that were not AMP-equipped (the smaller vessels China Shipping was using at the time were AMP-equipped). The Port granted China Shipping a waiver from the AMP requirement about two weeks later. Email from Z. Bing to K. McDermott (Nov. 25, 2011) (Attachment A69 (POLA001727)); Email from K. McDermott to Z. Bing (Dec. 12, 2011) (Attachment A69 (POLA001742)).
[25] Middle Harbor FEIR at ES-32 (Table ES 8-1) (April 2009) (Attachment C12) ("Mitigation Measure AQ-5: Shore-to-Ship Power ("Cold Ironing"). All OGV that call at the Middle Harbor container terminal shall utilize shore-to-ship power while at berth according to the following schedule: (1) 33 percent of all OGV by December 2009 (2) 66 percent of all OGV by March 2012, and (3) 100 percent of all OGV by December 2014. Lease stipulations shall include

terminal are set to use AMP starting January 2018, per the certified Final EIR/EIS for that project.[26] The RDSEIR does not explain why a 100% AMP requirement is *in*feasible at the China Shipping terminal when shipping lines have been—and are increasingly planning to—comply with the same requirement at the Port of Los Angeles and the Port of Long Beach.

Further, the RDSEIR notes that the California Air Resources Board has directed its staff to amend the State's At-Berth Regulation to achieve 100% compliance by all vessels by 2030, and that the Port committed in its 2017 CAAP "to participate in the State's efforts to achieve 100% compliance with CARB's regulation." RDSEIR at 2-14. There is an obvious disconnect between the Port's commitment to align its efforts with CARB's amended At-Berth Regulation, and its claims that a 100% AMP requirement is infeasible.

Regardless, even if the 100% AMP requirement is somehow infeasible, the Revised Measure must be strengthened to meet the Port's CEQA obligation to adopt all feasible mitigation measures. Specifically, the Port should require that 100% of ships at dock are mitigating at-berth emissions with either shore power *or* an alternative emissions control system. Limited exceptions could be granted for emergencies.

This recommendation is supported by recent comments submitted by the State of California on the Port's Everport project. In its comments, CARB urged the Port to require a 100 percent shore power compliance rate from vessels equipped with short power, and alternative capture and control systems for all ships that are not equipped to use shore-based electricity.[27]

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consideration of alternative technologies that achieve 90 percent of the emission reductions of cold-ironing.").

[26] Mitigation Measures: Berth 136-147 [TraPac] Container Terminal Project EIR (FEIR Mitigation List) at 4, *available at* https://www.portoflosangeles.org/EIR/TraPac/FEIR/FEIR_Mitigation_List.pdf (Attachment C14) ("MM AQ-6: AMP. Ships calling at Berth 136-147 shall use AMP while hoteling at the Port in the following at minimum percentages: (a) 2009: 25% of ship calls; (b) 2010: 50% of ship calls; (c) 2012: 60% of ship calls; (d) 2015: 80% of ship calls; and (e) 2018: 100% of ship calls. Additionally, by 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at 100 percent compliance rate, with the exception of circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship.").

[27] Letter from E. Yura, CARB, Chief, Emissions Assessment Branch Transportation and Toxics Division, to C. Cannon, City of Los Angeles Harbor Department and T. Stevens, U.S. Army Corps of Engineers (June 5, 2017) (commenting on the Everport Container Terminal Project Draft EIR) (Attachment E6). CARB's push for a 100% compliance rate is consistent with its March 2017 resolution wherein it directed its staff to "within 18 months. . . develop At-Berth regulation amendments that achieve up to 100% compliance by 2030 for LA Ports." CARB, Resolution 17-7, 2016 State Strategy for the State Implementation Plan (March 23, 2017), available at https://www.arb.ca.gov/planning/sip/2016sip/res17-7.pdf (Attachment G1); *see also* Attachments D1-D2, G4 (CARB certification of at berth alternative control systems).

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Finally, the RDSEIR claims that "[t]he Port does not have the authority to impose any specific emissions reduction technology on OGVs as they are internationally flagged vessels subject only to IMO regulations." RDSEIR at 3.1-54. This is an inaccurate statement of the law given the Port's authority as a landlord to impose lease conditions on its tenants, including China Shipping, and is contrary to the authority the Port proposes to assert under its revised measures for ships.

Given the number of vessels that are anticipated to visit the terminal, the length of time these larger vessels will be docked for offloading, and the amount of emissions released while vessels are at berth, requiring 100% of vessels to mitigate at-berth emissions would meaningfully reduce operational emissions.

D. The 2008 VSR measure (MM AQ-10) is feasible

The Port should maintain a 100% compliance rate with the Port's vessel speed reduction program, as envisioned in the 2008 EIR.

The 2008 EIR, MM AQ-10, required that starting in 2009, 100% of ocean going vessels calling at the China Shipping Container Terminal comply with the Port's VSR program within a 40 nm radius of Port Fermin.[28] The RDSEIR purports that a 100% compliance rate is infeasible, and proposes to revise the measure to require 95% compliance starting on the effective date of a new lease amendment between LAHD and the tenant.

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The RDSEIR asserts that vessels cannot achieve a 100% compliance rate because of pressure on vessel schedules caused by weather, port delays, and mechanical problems, and the need to maintain economic competitiveness. RDSEIR at 2-16, 2-17. These reasons, however, are generically asserted. The RDSEIR does not point to any data or statements from China Shipping validating the Port's infeasibility claims, or analysis finding that the original VSR requirements would render China Shipping's operations economically impracticable. Further, nothing has changed since 2008 that would have rendered the VSR measure feasible in 2008 and infeasible now.

Moreover, the Port's own data and data from its neighbor, the Port of Long Beach, demonstrate that a 100% compliance rate is achievable. For example, the Port's website indicates the China Shipping Terminal was 100% complaint with the Ports VSR program at both 20 nm and 40 nm in 2016.[29] In 2017, three shipping lines (Chevron USA Marine Branch, Evergreen Marine Corp.,

[28] FEIR Mitigation Monitoring and Reporting Program at 2-13.
[29] Port of Los Angeles, Vessel Speed Reduction Compliance (2016), *available at* https://www.portoflosangeles.org/environment/progress/wp-content/uploads/2017/01/VSR-Graphic-1-4-2017-2.pdf (Attachment C6).

and MSC Mediterranean Shipping Co.) were 100% compliant with the Port's VSR program at 40 nm.[30] Data on China Shipping's compliance in 2017 were not available on the Port's website.

Data from the Port of Long Beach, which also operates a VSR program, demonstrates that in 2016, 113 vessel operators achieved 100% compliance with Long Beach's VSR program within the 40 nm zone.[31] One of these vessel operators was China Shipping Container Lines, while another was Yang Ming (one of the shipping lines that uses China Shipping's terminal). RDSEIR at 2-14. In 2017, 115 vessels operators achieved 100% compliance with Long Beach's VSR program within the 40 nm zone.[32] Again, China Shipping[33] and Yang Ming were among the operators who achieved 100% compliance.

The Port of Long Beach has also certified environmental impact reports requiring 100% compliance with VSR. The Middle Harbor project required 100% compliance by 2014.[34] And

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[30] Port of Los Angeles, Vessel Speed Reduction Compliance (2017 YTD), *available at* https://www.portoflosangeles.org/environment/progress/wp-content/uploads/2017/08/vsr-graphic-8-22-2017.pdf (Attachment C18).

[31] Port of Long Beach, Green Flag Incentive Program Operator Compliance Monthly Report (1/1/2016–12/31/2016), *available at* http://www.polb.com/civica/filebank/blobdload.asp?BlobID=13769 (Attachment C7). Long Beach has a voluntary, incentive based program that rewards vessel operators for slowing down to 12 knots or less within 40 nautical miles (nm) of Point Fermin. Port of Long Beach, Green Flag Incentive Program, *available at* http://polb.com/environment/air/greenflag.asp (Attachment C8). In some instances, however, such as for tenants at the Port of Long Beach's Middle Harbor property, VSR is a mandatory lease requirement. Given that the VSR programs at both ports are largely a voluntary incentive based program, operators can elect not to participate in the program. Thus, the number of vessel operators cited as in 100% compliance with the program at the Port of Long Beach could be higher if the VSR requirements were mandatory.

[32] Port of Long Beach, Green Flag Incentive Program Operator Compliance Monthly Report (1/1/2017–12/31/2017), *available at* http://www.polb.com/civica/filebank/blobdload.asp?BlobID=14364 (Attachment C19).

[33] China Shipping is listed within the Port of Long Beach's Operator Compliance Monthly Report (1/1/2017 – 12/31/2017) as "COSCON," which is the name the COSCO Shipping Lines formerly traded under. https://www.coscon.co.uk/. In February 2016, the China Ocean Shipping Group Company, or COSCO, and China Shipping Group merged to create the COSCO shipping line. RSEIR at 1-11.

[34] Port of Long Beach Middle Harbor FEIR, Table ES.8-1, *available at* http://polb.com/civica/filebank/blobdload.asp?BlobID=6227(Attachment C12) ("Mitigation Measure AQ-4: Expanded VSRP. All OGV that call at the Middle Harbor container terminal shall comply with the expanded VSRP of 12 knots from 40 nm from Point Fermin to the Precautionary Area.").

the tenant at Middle Harbor, Orient Overseas Container Lines (OOCL), had a 100% compliance rate with VSR in 2016.[35]

Recent comments by the State of California on the Port of Los Angeles' Everport DEIR/DEIS also indicate that the Port should adopt a VSR measure that requires compliance beyond 95%.[36] In CARB's comments, the agency noted that the terminal's vessels were already meeting an above 95% compliance rate in recent years, and thus, the Port should propose further mitigation to achieve additional emissions benefits.[37] Similarly, vessels serving the China Shipping Container Terminal at the Port of LA had a 96%-98% compliance rate within 40 nm in 2014 through 2016. RDSEIR, Table 2-1.[38] Accordingly, actual operations at the China Shipping terminal demonstrate that the revised measure's 95% compliance rate can be strengthened to comply with CEQA.

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For the above reasons, the RDSEIR fails to overcome the presumption that a 100% compliance rate for VSR is feasible, and has not demonstrated that a 95% compliance rate satisfies the Port's obligation to adopt all feasible mitigation measures.

Finally, the revised VSR measure envisions that a vessel operator shall either comply with VSR 95% of the time, or "comply with an alternative compliance plan approved by the LAHD for a specific vessel and type." RDSEIR at 2-17. The Revised Measure goes on to state that the alternative compliance plan shall demonstrate that it will "achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP." *Id*. In theory, we support providing compliance options to vessel operators that can achieve equivalent emissions reductions. The RDSEIR, however, does not provide any details on what might be included in the alternative compliance plan. Thus, there is no way for the public to provide input on whether those alternative measures are equivalent to VSR in terms of emissions reductions, or if they have unintended impacts, such as increasing the likelihood of whale strikes. The RDSEIR must include such information.

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E. The cargo handling equipment measures (MM AQ-15, AQ-16, AQ-17) are feasible, and can be strengthened to require utilizing zero emission technologies

The RDSEIR does not overcome the presumption that the 2008 EIR mitigation measures for cargo handling equipment are feasible, and weakens the measures without providing a legally valid reason for doing so. The RDSEIR also fails to consider the full range of feasible mitigation

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[35] Port of Long Beach, Green Flag Incentive Program Operator Compliance Monthly Report, 1/1/2016–12/31/2016, *available at* http://www.polb.com/civica/filebank/blobdload.asp?BlobID=13769 (Attachment C7).
[36] Letter from E. Yura, CARB, Emissions Assessment Branch Chief, Transportation and Toxics Division, to C. Cannon, City of Los Angeles Harbor Department and T. Stevens, U.S. Army Corps of Engineers at 5 (June 5, 2017) (Attachment E6).
[37] *Id.*
[38] *See also supra* Port of Los Angeles, Vessel Speed Reduction Compliance at note 29.

measures for its revised cargo handling equipment mitigation measures. **In general, the cargo handling equipment mitigation measures should be revised to require accelerated deployment of zero emission cargo handling equipment, achieving 100% zero emission cargo handling equipment by 2030 at the latest.** These comments address the mitigation measures for each category of cargo handling equipment in turn.

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Local and state entities have sent clear signals to the ports that zero emission cargo handling equipment technologies must be implemented in the near term. The Mayors of Los Angeles and Long Beach issued an executive directive in June 2017, setting a goal that the ports fully implement all (100%) zero emission cargo handling equipment by 2030. CARB also adopted a resolution in March 2017 directing staff to develop regulations for cargo handling equipment to achieve up to 100% zero emissions by 2030.[39] These commitments are further embraced by the ports Final CAAP Update 2017.[40]

First, as explained in detail in these comments, the mitigation measures for cargo handling equipment set forth in the 2008 EIR are feasible. Second, and in accordance with CEQA's mandate to consider all feasible mitigation measures, the RDSEIR can and should incorporate enhanced mitigation measures that will achieve the zero emission future envisioned by the Mayors, San Pedro Bay Ports, and CARB. The project should include a mitigation measure that requires all zero emission cargo handling equipment by 2030, and should deploy zero emission equipment much more rapidly where it is feasible to do so. The Revised Project should also contain a strong plan to develop the electric infrastructure necessary to support zero emission technology. Finally, the project should be revised to implement additional zero emission technology demonstration projects. [41]

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Many types of zero emission cargo handling equipment are commercially available and currently operating in several terminals at the Ports of Los Angeles and Long Beach. In November 2017, there were already 333 pieces of zero emission cargo handling equipment operating at the Ports

[39] CARB, Resolution 17-7, 2016 State Strategy for the State Implementation Plan (March 23, 2017), *available at* https://www.arb.ca.gov/planning/sip/2016sip/res17-7.pdf (Attachment G1).
[40] Final CAAP Update 2017 at 4-5, 51-52 (Attachment C20).
[41] In numerous documents, the Port has emphasized the critical importance of technology demonstrations as a step to emissions reductions. *See e.g.*, 2017 Final CAAP Update at 51 ("To get to zero emissions it will be necessary to identify, demonstrate, and deploy technologies in port operations . . . "). To the extent that certain types of zero emission terminal equipment are not yet commercially available or proven in widescale deployment, the Port should require near-term demonstration projects for those pieces of technology, requiring replacement with zero emission technologies contingent on the success of those projects. Or, the measures could tier from demonstration projects that are currently happening at other terminals, and require replacement of equipment with zero emission technologies once those projects are completed successfully.

of Los Angeles and Long Beach, with an anticipated 519 pieces of equipment in 2020 and 573 in 2025.[42]

Specifically, zero emission cargo handling equipment used at the Trapac and Middle Harbor terminals demonstrates that in addition to reducing diesel emissions and greenhouse gases, replacing diesel fueled cargo handling equipment with high density automated electrified equipment can result in significant efficiency gains.[43] This has been shown to lead to cost savings, allows terminals to handle increased cargo volumes, and results in lowered truck turn times.[44] Our understanding is that the Trapac terminal has maintained the same level of jobs with electrification and automation. With that said, we strongly encourage that efforts to automate terminals be coupled with workforce development and training so that workers can transition to new jobs to support the new technologies. In short, zero emission cargo handling equipment is not only technologically feasible, it also increases efficiencies and profits, and is compatible with job retention.

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Thus, as a first step, the RDSEIR should study the terminal operations at Trapac and Middle Harbor, account for the types of equipment utilized at those terminals (which we understand is nearly 100% electric) and set forth similar measures for this project.

i. The 2008 electric rubber-tired gantry crane measure (MM AQ-17) is feasible

The 2008 EIR MM AQ-17 required that all rubber-tired gantry cranes shall be electric by January 1, 2009. Today, nine years past the deadline, none of the rubber-tired gantry cranes (RTGs) are fully electric.[45] The RDSEIR requires only four electric RTG cranes to be installed seven years after the effective date of the new lease amendment between LAHD and the tenant, and that diesel-electric hybrids replace the rest of the RTG cranes.[46] As discussed below, the DSEIR does not overcome the presumption that the 2008 EIR's electric RTG measure is

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[42] Final CAAP Update 2017 at 58 (Table 4).
[43] Electrification of cargo handling equipment does not necessarily require automation.
[44] JOC.com, "LA-LB terminals, carriers try to ensure ports' green plan doable," *available at* https://www.joc.com/port-news/us-ports/la-lb-terminals-carriers-try-ensure-ports-green-plan-economically-feasible_20170309.html (Attachment H4); JOC.com, "Automation halves truck turn times at Long Beach port terminal," *available at* https://www.joc.com/port-news/us-ports/port-long-beach/automation-halves-truck-turns-times-long-beach-port-terminal_20160531.html (Attachment H5).
[45] RDSEIR at 2-4 (Table 2-1).
[46] RDSEIR at 2-20 – 2-21. It is unclear how many pieces of cargo handling equipment currently operate at the terminal, including RTG cranes. The DSEIR provided some information on this within, DSEIR Table 2-5 (Cargo-handling equipment inventory of West Basin Container Terminal), which appears to have been removed from the RDSEIR.

feasible. **The Port should maintain the requirement to replace all RTGs with fully electric, zero emission RTGs.**

The RDSEIR does not offer sufficient evidence to explain why the original mitigation measure for RTGs was never implemented. To the contrary, the Port admits that it is feasible to install at least four additional electric RTGs today; the RDSEIR states that the infrastructure currently exists to support four electric RTGs in the "surcharge area."[47] The Port fails to explain why it has delayed installing these four electric RTGs in the surcharge area, despite acknowledging that this installation was clearly feasible. According to a draft evaluation of compliance status updated in September 2014, the WBCT had plans to replace existing diesel-powered RTGs with five electric RTGs and five hybrids by the end of 2014.[48] The Port does not acknowledge these plans in the RDSEIR nor do they explain why these plans were abandoned.

Further, it appears that following certification of the 2008 Final EIR, the terminal purchased a number of new, non-compliant cranes, purchasing at least two new non-compliant diesel cranes with model years 2011 and 2013,[49] and putting a 2015 model year hybrid crane into service in 2015.[50, 51] The Port must explain why noncompliant new diesel cranes were purchased instead of electric cranes, in flagrant violation of the 2008 Final EIR.

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Moreover, to the extent that these newer, noncompliant purchases increase the costs of electrification today (because they would require replacing the cranes before the end of their useful life), the Port may not use the additional costs incurred to argue infeasibility.[52] In addition, the record shows that the Port paid China Shipping at least $22 million to offset the costs of complying with the ASJ.[53] Any cost estimates from China Shipping related to complying with air quality mitigation measures or claims of competitive disadvantage should take these contributions into account.

The Port also does not provide any evidence to support its vague statements that terminal configuration, costs, and space constraints make the measure infeasible. In addition, the Port fails

[47] RDSEIR at 2-19, 3.1-54.
[48] Draft Evaluation of Compliance Status and Compliance Cost for Mitigation Measures for China Shipping Terminal (Nov. 20, 2013, revised Sept. 29, 2014) (Attachment A21 at POLA000812-13).
[49] DSEIR at 2-17, Table 2-5.
[50] Attachment A209 (ChinaShippingCPRA 611); Attachment A210 (ChinaShippingCPRA 613).
[51] DSEIR at 2-17, Table 2-5. Again, this table does not appear in the RDSEIR.
[52] The same argument should apply to all noncompliant equipment purchased after the 2008 Final EIR. For instance, DSEIR Table 2-5, which does not appear to be reproduced in the RDSEIR, shows 92 pieces of cargo handling equipment with model years between 2008 to 2014 in operation at the West Basin Container Terminal between about 2000 to 2014.
[53] Attachment A68 at POLA001715 (describing $22 million contribution to China Shipping); Attachment A68 at POLA001722 (describing multi-million dollar payments to China Shipping to cover the costs of e.g., yard tractors and rubber tired gantries).

to explain what makes implementation of electric RTGs infeasible *now* as compared to when the final EIR was certified in 2008. Was the terminal previously configured in a way that could have accommodated all-electric RTG cranes? Could the terminal have been developed in a way to make the configuration work differently or to provide the infrastructure to support electrification? How much did delay in implementation contribute to today's cost estimates of compliance? The Port must answer these questions to overcome the presumption that the requirement to install all-electric RTG cranes was, and still is, feasible.

The presumption that installing all-electric RTG cranes is feasible is bolstered by a plethora of evidence that electric RTGs are commercially available and relatively inexpensive substitutes for diesel. The Long Beach Container Terminal has installed and initiated full-scale operation of electric RTGs. CARB also recognizes that electric rubber-tired gantry cranes are a "commercially available, mature technology for container handling."[54] There are at least five commercially available grid electric RTG models, and at least five commercially available grid electric retrofits.[55] Electric RTGs have been in-use at foreign ports since 2002, and are currently in-use at domestic ports.[56] To give one example, the Port of Long Beach is repowering nine rubber-tired gantry cranes to full electric power.[57]

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Electric RTGs are not only commercially available, they are also relatively inexpensive replacements for diesel. Electric-powered RTGs are only about 10 percent more expensive than diesel models.[58] The operating cost benefits of electric RTGs are significant because they result in maintenance cost savings and provide significant reductions in energy usage, on the order of 60 percent compared to diesel-fueled cranes.[59]

For the above reasons, the RDSEIR fails to overcome the presumption that requiring replacement of all RTG cranes at the terminal with zero emission RTGs is feasible.

ii. The yard tractor measures (MM AQ-15 and AQ-17) are feasible, and can be strengthened to require zero emission yard tractors

NRDC-29

The Port fails to overcome the presumption that the 2008 EIR mitigation measures for yard tractors are feasible. Moreover, the Port has failed to consider all feasible mitigation measures in

[54] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment, III-11, table III-2 (2015), *available at* https://www.arb.ca.gov/msprog/tech/techreport/che_tech_report.pdf (Attachment E2).
[55] *Id.*; *see also* Attachment J8 (zero emission RTG by Kalmar).
[56] *Id.* at III-12.
[57] Final CAAP Update 2017 at 57.
[58] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-12.
[59] *Id*. at III-13.

revising its technology requirements for yard tractors. **The Port should strengthen MM AQ-15 to require the terminal to transition to all zero emission yard tractors.**

The 2008 EIR MM AQ-15 required that all yard tractors run on alternative fuel beginning in September 2004 (as required by the ASJ) through the end of 2014, and that by 2015 all yard tractors utilize the cleanest available NOx alternative fueled engines meeting 0.015 gm/hp-hr for particulate matter.[60] MM AQ-17 also required that China Shipping participate in an electric yard tractor pilot project, requiring them to deploy two electric yard tractors within one year of lease approval and, if the program was deemed successful, to replace half of the terminal's tractors with electric tractors within five years.[61]

The project did not achieve the alternative fuel requirement until four years after the ASJ deadline.[62] Today, none of the yard tractors meet the engine requirement, and the electric yard tractor pilot project has not been implemented.[63]

The RDSEIR deletes the electric yard tractor pilot project, and phases in compliance with an ultra-low NOx standard and Tier 4 standards for other criteria pollutants within five years of the effective date of the new lease amendment.

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The RDSEIR silently glosses over the deletion of the 2008 EIR requirement for deploying an electric yard tractor pilot project, without even attempting to provide a reason or explanation for the deletion. The record gives us no reason to believe that the demonstration project was infeasible. Communications between representatives of China Shipping and Los Angeles dated March 25, 2015 stated that WBCT would be able to participate in a one-year pilot project if a suitable tractor could be found, and failed to explain why it had not been implemented yet.[64] Suitable tractors were available at that time, and were being used at other terminals and facilities.[65] Successful implementation of the electric yard tractor pilot project would have resulted in some of the terminal's yard tractors being replaced with zero emission yard tractors, significantly reducing terminal emissions. Furthermore, as the San Pedro Bay Ports have stated in numerous reports and studies, demonstration of zero emission technologies is an important

[60] RDSEIR at 2-4 (Table 2-1).
[61] *Id.* at 2-5 (Table 2-1).
[62] RDSEIR at 2-4 (Table 2-1).
[63] *Id.* at 2-4 - 2-5 (Table 2-1).
[64] Letter from Erich P. Wise, Flynn, Delich & Wise LLP, to Janna B. Sidley, Office of the City Attorney, City of Los Angeles (March 25, 2015) (Attachment A33 at POLA000995).
[65] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment, pp. III-17 to III-19, Table III-4 (Attachment E2); Port of Los Angeles, Zero Emission White Paper (July 2015), A1-3, Table A1-1 (Attachment C11).

step to accelerating deployment of emissions reducing technologies, creating markets, and sending demand signals to manufacturers.[66]

The Port also fails to provide substantial evidence justifying why the original yard tractor engine requirement was not met. As Los Angeles has recognized, China Shipping could have presented evidence of infeasibility when the 2008 EIR/EIS was certified, but chose not to do so.[67]

Further, the record indicates that the yard tractors serving the terminal could be replaced much faster than envisioned under the revised measure. In a March 25, 2015 letter, representatives for China Shipping indicated that replacements for the earliest purchased yard tractors would be due in three to five years, and that replacements for the 102 yard tractors purchased in 2007 and 2008 would come due in five to six years.[68] Under this logic, a feasible time frame for replacement tied to the useful life of the tractors could be due as early as March 2020, rather than five years after the effective date of the lease amendment, which Port predicts will be 2019.

In addition to demonstrating that the revised measure includes the most rapid feasible deployment schedule for cleaner yard tractors, the Port must also demonstrate that it is deploying the cleanest feasible technology, including electric yard tractors, hybrid electric engines, and Automated Guided Vehicles.[69] In particular, the Port's cursory dismissal of zero emission yard tractors does not satisfy CEQA and is not supported by the evidence. Various terminals at both ports are using electric yard tractors in regular operations.[70] Long Beach Container Terminal

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[66] The Port has recognized that demonstration projects are the pathway to commercializing future technologies that have life-saving emissions reductions. Its own Zero Emission White Paper lionized the importance of demonstration projects for yard tractors in demonstrating successful technologies for drayage trucks, stating that they are a preferred type of technology for demonstrations due to the controlled environment within the port, providing a "simpler and more stable platform for demonstration," and stating that "increased expenditures focused on developing off-road zero emission yard tractors would help to ***accelerate*** the commercialization of on-road short haul drayage trucks." Port of Los Angeles, Zero Emission White Paper at 55; 23–25. The White Paper lists extensive reasoning why developing zero emission yard tractors should be a priority for the Harbor District, including that demonstration is easier within the terminal, off-road requirements are less stringent, the limited range within the terminal reduces EV range anxiety, the potential for a large electric yard tractor market worldwide would accelerate commercialization, that longer term payback may be more palatable to yard tractor tech developers than electric drayage truck developers, and that electric yard tractor development complements development of heavy-duty trucks. *Id*. at 23–25.

[67] Letter from Janna Sidley, Office of the City Attorney, City of Los Angeles to China Shipping (March 3, 2015) (Attachment A32).

[68] Letter from Erich P. Wise, Flynn, Delich & Wise LLP to Janna B. Sidley, Office of the City Attorney, City of Los Angeles (March 25, 2015) (Attachment A33 at POLA000994).

[69] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment, at III-5, Table 1; III-6 to III-7; III-29.

[70] Final CAAP Update 2017 at 51, 57.

(LBCT) at Middle Harbor is using electric yard tractors. Our understanding is that Trapac is also using electric yard tractors or equivalent equipment. As noted above, the Port should assess the electrified operations at both terminals and set forth similar measures here. Other examples of electric yard tractors in use include:

- At two terminals at the Port of Long Beach, California Energy Commission is funding a demonstration of 12 battery-electric yard tractors.[71]
- The Port of Los Angeles Everport terminal has a project underway to demonstrate eight zero emission yard tractors and 20 near-zero emission yard tractors.[72]
- The Port of Los Angeles Pasha terminal is demonstrating four zero emission electric yard tractors.[73]
- In March 2017, the first of 27 all-electric yard trucks started work at a freight yard in Southern California, funded by the State of California through a special emissions reduction program that aims to expedite commercialization of zero emission heavy-duty trucks.[74]
- Manufacturers TransPower, OrangeEV, and Balqon have conducted or planned electric yard tractor demonstration projects at several different sites in the U.S.[75]
- As part of the Zero-Emission and Near Zero-Emission Freight Facilities (ZANZEFF) project, the Port of Long Beach will deploy 33 battery-electric yard tractors, and the Port of Hueneme will use two zero emission yard tractors.[76]
- As part of Long Beach's Commercialization of POLB Off-Road Technology Demonstration Project (C-PORT), that port will deploy one battery-electric yard tractor at Long Beach Container Terminal at Pier E.[77]

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In addition, there are currently at least three Zero Emission Class 8 Electric Tractors available on the market:

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[71] *Id.* at 57.
[72] *Id.*; CEC grant announcement (Attachment H3); Everport Terminal DEIR, presentation (Attachment C4).
[73] Final CAAP Update 2017 at 57.
[74] *See* CARB News Release: "First of 27 electric trucks coming to Southern California freight and rail yards," *available at* https://www.arb.ca.gov/newsrel/newsrelease.php?id=900 (Attachment H6).
[75] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-17 to III-19, Table III-4.
[76] CAAP Stakeholder Advisory Group Presentation Sept. 2018 *available at* http://www.cleanairactionplan.org/documents/presentations-9-26-18-caap-update-stakeholder-advisory-meeting.pdf/; https://www.portoflosangeles.org/references/news_091418_carb_toyota (Attachment C21).
[77] http://www.polb.com/news/displaynews.asp?NewsID=1741 (Attachment H14).

- TransPower - Electric Class 8 Electric Yard Tractor
- BYD - Electric Class 8 Tractor - 8Y
- Terberg - Electric Class 8 Yard Tractor - Terberg YT202-EV[78]

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Electric yard tractors are also cost effective, as their prices are expected to "drop significantly" as the technology matures, and their lifetime costs are reduced compared to traditional technologies because they save on engine maintenance, fuel costs, and employ a regenerative braking system that reduces brake wear.[79] For instance, Orange EV estimates that an owner of 10 electric yard trucks would save $6 million over 10 years in reduced fuel and maintenance costs.[80] The numerous deployments and manufacturers of zero emission yard tractors make it clear that requiring all electric yard tractors is feasible.

For the reasons stated above, the Port should strengthen MM AQ-15 to require replacing existing yard tractors with electric yard tractors in the near-term.

iii. The forklift measure (MM AQ-17) is feasible and should be strengthened to require zero emission forklifts

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The 2008 EIR MM AQ-17 required that starting in January 2009, all forklifts purchased meet certain engine standards,[81] and that all forklifts meet Tier 4 off-road engine standards by the end of 2012. It is unclear from the RDSEIR to what extent these original mitigation requirements were complied with. The terminal also fails to comply with CAAP measure SPBP-CHE1, which required all forklifts to meet Tier 4 off-road engine standards by 2012.[82]

The RDSEIR provides no explanation for why the original mitigation measure became infeasible. Nevertheless, the Port proposes a revised measure that replaces 18-ton diesel forklifts with Tier 4 or cleaner engine forklifts from one to three years after the effective date of the new lease amendment. The revised measure also requires 5-ton forklifts of model years 2011 or older to be replaced with zero emissions units two years after the effective date of the new lease

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[78] *Supra note* 75; *see also* Attachments J1–J2, J13, J20 and J23 (data from technology manufactures including BYD, Terberg, and Transpower).
[79] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-20.
[80] *Id.* (citing Orange EV, Lower Total Cost of Ownership – Orange EV, May 2015, http://orangeev.com/lower-total-cost-of-ownership/).
[81] Starting January 2009, equipment purchases including forklifts shall be either 1) the cleanest available NOx alternative-fueled engines meeting 0.015 gm/hp-hr for PM or 2) the cleanest available NOx diesel-fueled engine meeting 0.015 gm/hp-hr for PM; and if no engines are available to meet that standard, the new engines shall be cleanest available and have cleanest VDEC. FEIR Mitigation List.
[82] CAAP Update 2010 at 28.

amendment.[83] While we support the Port's effort to require replacement of 5-ton forklifts with electric forklifts, the Port must go further to satisfy CEQA's mandate to consider all feasible mitigation measures. **The Port should strengthen MM AQ-17 to require the terminal to transition to all zero emission forklifts by 2030, starting with transitioning the oldest lower capacity equipment to zero emission.**

Both fuel cell electric forklifts and battery-electric forklifts are available. Lower capacity battery electric forklifts are commercially available and widely used in warehouse applications.[84] Battery electric forklifts are only 10-20 percent higher in capital cost than diesel forklifts for capacities of up to 6,000 pounds, and the return on investment for a battery electric forklift can be as short as 1 to 3 years due to reduced fuel and maintenance costs.[85] Fuel cell forklifts are also widely used, with about 8,000 hydrogen fuel cell electric forklifts operating at U.S. manufacturing facilities and warehouses, and 800 deployed in California.[86]

We were surprised to see that the project does not commit to an all zero emission hi-tonnage forklift requirement or even a demonstration project for that technology. The Port's claim that it is not feasible to electrify 12-ton and larger forklifts because forklifts above five tons are not available in all-electric models does not satisfy the CEQA requirement to consider all feasible mitigation measures.[87] Contradicting this statement, CARB has recognized that at least one manufacturer makes a forklift model with a lift capacity of 40,000 pounds, and lift capacities of up to 100,000 pounds are advertised.[88] And, the Pasha terminal at the Port of Los Angeles is demonstrating two hi-tonnage zero emission forklift retrofits.[89]

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[83] The Port must include additional information clarifying how many and which forklifts will be upgraded. According to Table B1-C, there is a schedule to replace 12 forklifts, upgrading 5 diesel forklifts of up to 18 tons to Tier 4 diesel or alternative fuel meeting Tier 4 (between 2019 and 2021), and another 7 LPG forklifts with capacities up to 5 tons upgrading to electric (2020). But the DSEIR indicates that there are 15 forklifts associated with the China Shipping terminal, so 3 are not accounted for in the replacement schedule.

[84] *See, e.g.*, Attachment J6 (describing Kalmar's electric forklift).

[85] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-20 to III-21 (also referencing (LiftsRUs, 2014) (EPRI, 2014)); CARB Mobile Source Strategy, App. A at A-24 (Typically, maintenance costs 25 to 50 percent less, fuel is 20 to 40 percent of the cost of fueling an internal combustion forklift, and electric forklifts have a 50 percent longer useful life than internal combustion forklifts. These benefits can lead to payback time on the higher initial capital cost in as little as one year.).

[86] CARB Draft Heavy-Duty Technology and Fuels Assessment: Overview at 10. Manufacturers include Crown, Raymond, Hyster, Caterpillar, and others, and are in the early commercialization phase as of 2015. (Attachment E1)

[87] RDSEIR at 3.1-54.

[88] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-20.

[89] Final CAAP Update 2017 at 57.

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Replacing the hi-tonnage forklifts with new diesel equipment—as the revised measure envisions—invests the terminal in additional polluting equipment for the long-term, leaves emissions reductions on the table, and hinders the terminal's ability to achieve 100% zero emission cargo handling equipment by 2030 as required by the CAAP, CARB regulations, and Mayors' Executive Directive.

For the reasons stated above, the Port should require all forklifts to be replaced with zero emission forklifts.

iv. The top-pick measure (MM AQ-17) is feasible, and should be strengthened to require zero emission top-picks

The 2008 EIR MM AQ-17 required that by January 1, 2009, all toppicks shall have the cleanest available NOx alternative fueled engines meeting 0.015 gm/hp-hr for PM.[90] As of 2014, none of the toppicks were alternative-fueled and only four meet the 0.015 gm/hp-hr PM standard.[91] The terminal also falls short of the CAAP, Measure SPBP-CHE1, Performance Standards for cargo handling equipment, which required toppicks to meet Tier 4 off-road engine standards by the end of 2012.[92]

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The RDSEIR proposes to abandon the alternative fuel requirement and push back the engine standard deadline, requiring a phased replacement of toppicks with Tier 4 off-road engines over the course of five years after the effective date of the new lease amendment. Instead, **the Port should require replacement of top picks with battery electric top picks by 2030, with interim milestones to phase-in the technology.**

The Port does not overcome the presumption that the 2008 EIR MM AQ-17 for toppicks is feasible, and at best asserts generic arguments that complying with the measure would increase China's Shipping's costs.[93]

Further, the Port's proposed schedule for replacing the top-picks is not the fastest feasible schedule. In a letter dated March 25, 2015, representatives for China Shipping wrote that the 8 top picks purchased in 2002 (which have Tier 1 engines) could be replaced in the following 18 months (by mid-2016), and that a reasonable timeframe to replace the other 30 was 3–5 years (2018 to 2020).[94] The Port fails to explain why the Tier 1 toppicks were not replaced in 2016, even though it appears that this would have been feasible. At minimum, the eight Tier 1 toppicks should be replaced with zero emission or Tier 4 complaint toppicks upon operation of the Revised Project, and the remaining toppicks should be replaced within two years.

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[90] RDSEIR at 2-4 (Table 2-1).
[91] *Id.*
[92] CAAP Update 2010 at 128.
[93] RDSEIR at 2-19.
[94] Letter from Erich P. Wise, Flynn, Delich & Wise LLP to Janna B. Sidley, Office of the City Attorney, City of Los Angeles (March 25, 2015) (Attachment 33 at POLA000995).

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Electric toppicks are currently being demonstrated at other terminals. The Pasha terminal at the Port of Los Angeles is testing a zero emission top handler retrofit.[95] The Everport terminal is demonstrating two zero emission top handlers.[96] And the ZANZEFF project will deploy one battery electric top handler.[97]

At a minimum, the Port should require the terminal to participate in a zero emission toppick demonstration project, or to require installation of electric toppicks contingent on the result of its demonstration at e.g., Pasha or Everport.

v. The revised measure for sweepers and shuttle buses (MM AQ-17) should be strengthened to require near-term replacement with zero emission technologies

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The RDSEIR proposes revised measures for sweepers and shuttle buses, requiring gasoline shuttle buses to be zero emission units by seven years after the effective date of the new lease amendment and requiring sweepers to be alternative fuel or cleanest available six years after the effective date of the lease amendment. While we support the Port's efforts to transition to zero emission shuttle buses, **the Port should strengthen MM AQ-17 to require immediate replacement with electric shuttle buses and revise MM AQ-17 to require implementation of battery electric sweepers.**

Preliminarily, the RDSEIR makes it impossible to evaluate whether the proposed revisions are legitimate. The RDSEIR does not explain which of the original mitigation measures it is relaxing with respect to sweepers and shuttle buses, nor does it assess compliance rates. Without this assessment, it is impossible to know how the original measures are revised.

Further, the RDSEIR fails to provide any justifications for its proposed deadline to replace diesel powered sweepers and shuttle buses. Zero emission buses are commercially available today, and are quickly dropping in price.[98] Over 100 vehicles have been deployed.[99] For example, Phoenix Motorcars manufactures an electric zero emission shuttle bus that can drive up to 100 miles per charge and costs only $100,000 more than a similar diesel model.[100] In addition, battery electric powered sweepers "are mature technologies that are in use at distribution centers and manufacturing plants."[101]

For the reasons stated above, the Port should revise MM AQ-17 to require immediate replacement of shuttle buses with zero emission buses, and require battery-electric sweepers.

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[95] Final CAAP Update 2017 at 57.
[96] *Id.* at 43.
[97] Attachment C21 (CAAP Stakeholder Advisory Group Presentation Sept. 2018).
[98] CARB Draft Heavy-Duty Technology and Fuels Assessment: Overview at ii, 8-9.
[99] *Id.* at 11.
[100] *Id.* at 12.
[101] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-20.

vi. Lease measures AQ-1 and AQ-3 are not a substitute for considering all feasible mitigation measures

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Lease Measures AQ-1 and AQ-3 do not satisfy the Port's duty under CEQA to consider all feasible mitigation measures. Lease Measure AQ-1 seeks to phase-in feasible zero emissions and near zero emissions cargo handling equipment when existing equipment is replaced, or new equipment is purchased and added to the existing fleet. The measure contains vague language and no assurance that emissions reducing technology will result from the measure. Preliminarily, it is not clear how this lease measure interacts with MM AQ-17, which requires the phase in of *diesel* equipment after the lease amendment is executed. Moreover, the lease measure does not include the most rapid feasible deployment schedule for cleaner equipment since it allows older equipment to be replaced based on the Tenant's "procurement plan" and at natural fleet turnover rates.

Lease Measure AQ-3 requires the tenant to conduct a one-year zero emission demonstration project with at least ten units of zero emission cargo handling equipment, and then assess the feasibility of using that equipment. The Lease Measure does not specify what types of cargo handling equipment should be included, nor when the demonstration project is due. The tenant is not required to conduct a feasibility assessment evaluating zero emission technologies until 2020 and 2025, yet Lease Measure AQ-3 purports to support the goal of transitioning to zero and near-zero emission technologies by 2030. Finally, relying on the tenant's self-assessment of zero emission technology to determine feasibility cannot be counted on to lead to emission reductions, since it is in the tenant's best interest to avoid implementing zero emission technologies that can be costlier in the near term than sticking with status quo polluting equipment.

F. The LNG truck measure (MMAQ-20) is feasible, and can be strengthened to require zero emissions vehicles

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In 2008, after a thorough study that included pulling back and revising the initial DEIR, the Port concluded that phasing-in LNG trucks at the China Shipping terminal was feasible. In 2013, the Port concluded that a similar facility-specific phase-in of cleaner trucks was feasible at the near-dock Southern California Intermodal Gateway (SCIG) project.[102]

Nothing has changed about the Port drayage system from 2008 to the present. Hundreds of LNG trucks now serve the Port. LNG trucks composed 8.2% of the Port's truck calls in 2014, with the

[102] Los Angeles Harbor Department, Final Mitigation and Monitoring Program, SCIG Project EIR at 2-9 (March 2013) (MM AQ-8 requires phasing-in "low-emission drayage trucks" at the SCIG facility) (Attachment C9).

percentage likely increasing in future years.[103] Class VIII LNG trucks are readily available in the market.[104]

Rather than try to fix the problem that it caused, the Port now wants to avoid the whole issue by saying, for the first time in any EIR, that a terminal-specific drayage plan is infeasible. This systemic infeasibility argument is a litigation artifact, manufactured after the Port got caught violating CEQA. In hundreds of pages of documents that predate the disclosure of the Port's failure to meet the 2008 mitigation measures, the Port never once asserted that any of the 2008 mitigation measures was infeasible—in fact, the Port strongly criticized China Shipping for failing to present data on infeasibility. Nor does the Port's new argument meet the CEQA definition of infeasibility. Moreover, the Port's do-nothing approach to diesel trucks violates Mayor Garcetti's recent zero emission policy directive and exacerbates the greenhouse gas problem that the Port admits that it has.[105]

Today, much more is possible than was the case in 2008. Now, there are feasible opportunities to move to zero emission drayage and reducing the number of diesel truck trips associated with the terminal. Intra-port drayage, for example to the proposed new HPEC peel-off yard, can be handled now by available electric trucks with 100 miles plus of range. Short-haul zero emission trucks with 100-mile range and 1–3 hour charge times are available now that can service the near-dock railyards and peel-off yards. Trucks with a 200-mile range and faster charging time or replaceable batteries are being developed and tested now in Los Angeles and Long Beach, supported by massive amounts of grant funding. Additional funding from the Volkswagen cheating scandal settlement will be available in 2019. These zero emission trucks are huge improvements over 2008 LNG trucks and diesel trucks, and will help with the Port's air pollution and greenhouse gas problems. As we pointed out in our September 27, 2017 letter, still uncontradicted by the Port, longer drays will soon be possible with equipment from Volvo, BYD and others, and the Port should require China Shipping to commit to their use.

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[103] DSEIR App. B at B-12.
[104] *See, e.g.,* "Natural Gas: What Fleets Need to Know, Part 2 – New Engines, More Options," *available at* http://www.truckinginfo.com/channel/fuel-smarts/article/story/2012/09/natural-gas-what-fleets-need-to-know-part-2-new-engines-more-options.aspx (Attachment J29); Cascadia Natural Gas: https://freightliner.com/trucks/cascadia-natural-gas/ (Attachment J30); https://cumminsengines.com/volvo; Kenworth: "Kenworth T680 and T880 Add Cummins Westport ISL G Near Zero Emissions Natural Gas Engine," *available at* http://www.kenworth.com/news/news-releases/2016/october/isl-g/; Peterbuilt: "Peterbuilt models 579, 567 Now Available with LNG Power," *available at* http://www.peterbilt.com/about/media/2015/459/ (Attachment J31); Mack: "Cummins Westport 1SX12 G Natural Gas," *available at* https://www.macktrucks.com/powertrain-and-suspensions/engines/cummins-natural-gas/.
[105] Joint Directive (Attachment D5); DSEIR at 3.2-21–3.2-41.

i. The LNG truck measure (MMAQ-20) is and was feasible

Mitigation measure MMAQ-20 in the 2008 EIR required a phase in of LNG trucks.[106] This did not happen. The Port knew contemporaneously that the phase-in was not happening because it had truck make information available to it through the port truck registry,[107] but did nothing to enforce the legally-binding mitigation measure except to nag China Shipping—which never agreed or expected to fund the LNG trucks.

In 2013, the Port approved a huge near-dock intermodal railyard project, SCIG. One of the approved mitigation measures called for a phase in of LNG-equivalent trucks to service the SCIG facility.[108] Although the SCIG matter was in litigation for years, the Port never claimed in that litigation that this drayage measure is infeasible.

In fact, LNG trucks are in use now at the Port, as the Port's own data shows,[109] and others are readily available if it were a good idea to add them to the fleet now.[110] From a logistics standpoint, having one or two facilities served by LNG trucks is feasible as the Port recognized in 2008 and 2013 by the method of turning away non-LNG trucks at the gate.[111] Other measures to increase use of cleaner trucks could include expanding Pier Pass (encouraging trucks to work the Port in the evening), enacting a dirty truck rate and creating a preferential lane for clean trucks (as the Port contemplates in its Clean Air Action Plan), requiring cleaner trucks going to peel-off yards (also as contemplated in the Clean Air Action Plan), and providing other incentives through an appointment system such as are now in place at the TraPac facility and Middle Harbor in Long Beach.

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Thus, nothing in the RDSEIR overcomes the presumption that the previously certified LNG truck measure is feasible. *See Napa Citizens*, 91 Cal. App. 4th at 359. The factual circumstances provided in the RDSEIR for why the measure is not feasible today, RDSEIR at 2-19 to 2-20, existed in 2008; nothing has changed. The RDSEIR did not attempt to rebut the facts presented in our September 29, 2017 letter. The fact that the current Port administration has changed its mind to rationalize its failure to comply with binding mitigation measures has no bearing on the legal issues at play.

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[106] FEIR Mitigation Monitoring and Reporting Program.
[107] The Port of Los Angeles' drayage truck registry website is available at https://www.portoflosangeles.org/ctp/ctp_pdtr.asp.
[108] SCIG Final Mitigation and Monitoring Program at 2-9 (Attachment C9). The SCIG mitigation measure MM AQ-8 required phasing in "low-emission drayage trucks" at the SCIG facility. Such trucks were required to meet emissions standards that were comparable to LNG trucks at the time.
[109] *See* DSEIR App. B at B-12 (LNG trucks composed 8.2% of the Port's truck calls in 2014, with the percentage likely increasing in future years).
[110] *See supra* at note 127.
[111] *See* China Shipping FEIR, Responses to Comments at 2-188–2-189; SCIG FEIR, Responses to Comments Vol. 1 at 2-258–2-259 (Attachment C17).

ii. Zero emission drayage trucks are available now for short-haul

Zero emission drayage trucks are not a future science fiction fantasy. They are here now, particularly in short-haul applications that would be suitable for hauling containers from the Port to nearby off-dock railyards such as ICTF and SCIG (if SCIG is ever built). The South Coast Air Quality Management District (SCAQMD) recently described the status of zero emission drayage truck technology as follows:

> Heavy-duty diesel trucks in the South Coast Air Basin remain a significant source of emissions with adverse health impact, especially in the surrounding communities along the goods movement corridors near the Ports of Los Angeles and Long Beach (Ports), and next to major freeways. In order to mitigate the impact and attain stringent national ambient air quality standards for the region, SCAQMD has been aggressively promoting and supporting development and demonstration of advanced zero emission cargo transport technologies, in partnership with the Southern California Regional Zero Emission Truck Collaborative, comprised of the Los Angeles Metropolitan Transportation Authority, the Ports of Los Angeles and Long Beach, the Southern California Association of Governments, and the Gateway Cities Council of Governments.

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> With two grants, totaling approximately $14 million from the DOE's Zero Emission Cargo Transport (ZECT) Program, the SCAQMD has engaged leading EV integrators, including BAE Systems, Transportation Power (TransPower) and US Hybrid, as well as a major truck manufacturer, Kenworth, to develop and demonstrate a variety of Class 8 electric drayage trucks, consisting of eleven zero emission trucks – six battery electric and five fuel cell trucks – and seven hybrid electric trucks with extended range using CNG, LNG or diesel ICEs. These trucks are deployed in real world drayage operations to evaluate the trucks' performance and capability as well as to identify limitations in supporting demanding drayage duty cycles. To date, five battery electric trucks (BETs) have been completed and deployed in field demonstration with drayage fleets at the Ports. With an estimated range of 80 to 100 miles per charge, these BETs are deployed in neardock and local operations within a 20-mile radius from the Ports and have been providing dependable service with positive feedback from fleet drivers on its quiet and smooth operations with sufficient power and torque. In addition, one CNG plug-in hybrid electric truck (PHET), with 30-40 miles in allelectric range (AER) and 150-200 miles of total operating range, is currently undergoing final validation testing before deployment and four more trucks, including two fuel cell trucks with 150-200 miles of range, are expected to be completed in Q1 2017.

> Leveraging the technologies and expertise gained from the ZECT program, SCAQMD proposed and received a $23.6 million grant from CARB under the Low Carbon Transportation Greenhouse Gas Reduction Fund (GGRF) Investment Program for a larger-scale demonstration of advanced electric drayage truck technologies in 2016. The project is to develop a portfolio of most commercially

promising zero and near-zero emission drayage trucks for a statewide demonstration, across a variety of drayage applications in and around the Ports of Long Beach, Los Angeles, Oakland, Stockton and San Diego. SCAQMD has partnered with the four largest and most emission-impacted air districts in the state, namely Bay Area AQMD, Sacramento Metropolitan AQMD, San Joaquin Valley APCD and San Diego APCD, to build a comprehensive and coordinated approach to demonstrate the electric drayage trucks in diverse geographic and operational challenges across the state's interconnected goods movement system.

For the project, the SCAQMD has successfully engaged three major truck OEMs – Kenworth, Peterbilt and Volvo, and an international OEM leader in heavy-duty electrification, BYD, to drive commercially-viable product development stages in a targeted portfolio of zero emission and near-zero emission technologies and efficiency solutions, consisting of two battery-electric trucks, and two plugin hybrid electric trucks with extended range capability, using natural gas or diesel ICEs, as follows:

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BYD will develop 25 battery electric trucks based on their T9 prototype, which is optimized to serve near-dock and short regional drayage routes with a range of up to 100 miles. The truck is designed to provide similar operating experience compared to equivalent diesel and CNG trucks with matching or exceeding power and torque, using two 180 kW in-line traction motors.

Kenworth will develop four plug-in hybrid electric trucks with natural gas range extender, leveraging the prototype development under the ZECT program. These vehicles will target longer regional drayage routes, based a well-balanced blend of all electric and CNG-based hybrid operation to provide 250 miles in total operating range with a capability to operate 30-40 miles in zero emission mode in disadvantaged communities near ports, rail yards and distribution centers. The powertrain system includes a 200 kW genset using the recently certified 8.9L near-zero CNG engine and two AC traction motors, with comparable power output to Class 8 diesel trucks.

Peterbilt has partnered with TransPower to develop 12 battery electric drayage trucks, building on a platform developed under the ZECT program, incorporating lessons learned from ongoing demonstrations to further refine and optimize the electric drive system. Eight of the twelve trucks will be designed to provide up to 80-100 miles in range to support near-dock drayage routes, and four extended-range battery electric trucks will incorporate a new, higher energy density battery cells to provide up to 120-150 miles of operation to service regional drayage routes, such as from the San Pedro Bay Ports terminals to Inland Empire warehouses.

Volvo will build on the success of a past SCAQMD/DOE-funded project by focusing on efficiency and emission optimization of a commercially attractive, highly-flexible product, while ensuring zero emission miles for operations in the

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> most heavily emissions impacted communities. Furthermore, Volvo, in partnership with LA Metro, will also integrate ITS connectivity solutions, such as vehicle-to-infrastructure and vehicle-to-vehicle communications targeting dynamic speed harmonization and reduced idling, to reduce fuel use and emissions.
>
> This exceptional portfolio features demonstrations of truly commercial-pathway trucks. Highlighting the commercial path reality of this portfolio, the principal contractors are all major heavy-duty truck OEMs. This is significant because major OEMs can bring necessary engineering resources, manufacturing capability, and a distribution/service network to support the future commercialization of these demonstration vehicles. Our partnership also includes LA Metro's participation with ITS efficiency integration, electric utility participation, and 13 confirmed end-user fleets who are experienced with the specific challenges and opportunities associated with early technology integration efforts. The relationships and technologies in this project represent a culmination of years of experience: leading truck manufacturers, innovative large and medium suppliers, air quality management districts and industry groups all coordinated in a focused push to create OEM-quality, commercially-viable products that both reduce criteria and carbon emissions.

South Coast Air Quality Management District, Technology Advancement Office, *Clean Fuels Program 2016 Annual Report and 2017 Plan Update* (March, 2017) at 16–18.[112] See also http://news.cision.com/ab-volvo/r/volvo-trucks-to-introduce-all-electric-trucks-in-north-america,c2629974 (Volvo will introduce all-electric truck demonstrators in California in 2019 and commercialize them in North America in 2020).

With regard to funding, over $200 million in additional grant funds for zero emission trucks became available in 2018, see https://www.trucks.com/2018/09/28/california-415-million-funding-clean-trucks-freight-handling/, and over $400 million in proceeds from the Volkswagen settlement will be available in the summer of 2019; see https://www.arb.ca.gov/msprog/vw_info/vsi/vw-mititrust/vw-mititrust.htm.

The RDSEIR ignores this information. It also ignores the June, 2017 Joint Executive Directive from Mayors Garcia and Garcetti (issued the same week the DSEIR was published) confirming Los Angeles and Long Beach's commitment to transition to a zero emission freight transportation system, which includes a commitment to an all zero emission drayage fleet by 2035.[113] Also ignored are similar proclamations from Governor Brown, the state legislature (SB

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[112] Attachment E16; *see also* South Coast Air Quality Management District, PowerPoint, Zero Emission Drayage Truck Demonstration: Low Carbon Transportation Greenhouse Gas Reduction Fund (Nov. 1, 2016) (discussing demonstration project of 43 zero emission drayage trucks from BYD, Peterbilt, Kenworth and Volvo). (Attachment E15).

[113] Joint Directive (Attachment D5).

350),[114] and state and local air quality regulators that California must transition to a zero emission transportation system for passengers and freight to meet the state's air quality standards and greenhouse gas reduction goals.[115]

Importantly, recent evidence from CARB shows that battery electric drayage trucks have a lower life cycle cost than even diesel trucks, with costs further declining in 2023.[116] Thus, we believe that the Ports should require, as a feasible mitigation measure, the following minimum percentages of zero emission trucks at the terminal:

- 2020: 1.5% Zero Emission Trucks
- 2024: 25% Zero Emission Trucks
- 2028: 60% Zero Emission Trucks
- 2030: 90% Zero Emission Trucks
- 2035: 100% Zero Emission Trucks

This is a balanced commitment that will ramp up to 100% over the next seventeen years, ultimately meeting the goal directed by the Mayors of Los Angeles and Long Beach. It can be met at China Shipping and at all terminals in both ports.

NRDC-36

Further, given that zero emission trucks for short-haul applications are feasible today, the Port should also consider how it can require short-haul drayage trips through the terminal to use such trucks. For example, the Port should consider requiring short-haul deliveries to and from near dock railyards or peel-off yards to be performed by zero emission trucks.

It is not factually or legally permissible for the Port to throw up its hands and give up on China Shipping truck mitigation. The Port needs to get back to work and analyze feasible alternatives to the existing diesel fleet and show real movement to meeting Mayor Garcetti's directive.

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[114] SB 350 directs agencies, including the Ports of Los Angeles and Long Beach, to prioritize widespread "transportation electrification" as a necessary step toward complying with state law and attaining ambient air quality standards. Pub. Util. Code § 740.12 (a)(1)(A), (a)(2) ("Advanced clean vehicles and fuels are needed to reduce petroleum use, to meet air quality standards, to improve public health, and to achieve greenhouse gas emissions reduction goals . . . It is the policy of the state and the intent of the Legislature to encourage transportation electrification as a means to achieve ambient air quality standards and the state's climate goals. Agencies designing and implementing regulations, guidelines, plans, and funding programs to reduce greenhouse gas emissions shall take the findings described in paragraph (1) into account.").

[115] Office of Governor Edmund G. Brown Jr.: "Executive Order B-32-15," *available at* https://www.gov.ca.gov/news.php?id=19046 (Attachment D3); CARB Sustainable Freight: Pathways to Zero and Near-Zero Emissions (Discussion Draft) at 1, *available at* https://www.arb.ca.gov/gmp/sfti/Sustainable_Freight_Draft_4-3-2015.pdf (Attachment D9).

[116] Attachment C16 at exhibit entitled "Advanced Clean Local Trucks (Aug. 30, 2017)."

iii. The feasibility problem, if it exists, can be solved with a port-wide solution as contemplated in the mayors' executive directive

NRDC-37

The Mayors' joint proclamation puts both ports on a path to zero emission technology, including drayage trucks. If the Port believes that a trucking system involving only two facilities, China Shipping and SCIG, is not optimal, the Mayors' proclamation sets out a path for fixing that, Port-wide. But the RDSEIR fails to analyze this.

G. The priority access for cleaner drayage measure (LM AQ-2) should be limited to zero emission trucks

NRDC-38

The RDSEIR sets forth the following lease measure: "A priority access system shall be implemented at the terminal to provide preferential access to zero- and near-zero emission trucks." RDSEIR at 3.1-4. Because of the emissions and greenhouse benefits of zero emission trucks, and the zero emission goals of the Port and City, this measure must be strengthened to only provide priority access for zero emission trucks.

H. The Port should keep and amend the throughput tracking measure (LM AQ-23)

Like the DSEIR before it, the RDSEIR proposes to delete the following lease measure in the FEIR:

> If the Project exceeds project throughput assumptions/projections anticipated through the years 2010, 2015, 2030, or 2045, staff shall evaluate the effects of this on the emissions sources (ship calls, locomotive activity, backland development, and truck calls) relative to the EIS/EIR. If it is determined that these emissions sources exceed EIS/EIR assumptions, staff would evaluate actual air emissions for comparison with the EIS/EIR and if the criteria pollutant emissions exceed those in the EIS/EIR the new or additional mitigations would be applied through MM AQ-22 Period Review or New Technology Regulations.

NRDC-39

RDSEIR, Table 2-1. The Port continues to contend that this measure is not necessary because the RDSEIR "already takes into account the maximum capacity of the terminal and growth in TEU volume, and applies all feasible mitigation measures to address future air quality impacts." RDSEIR at 2-24.

As we stated in our prior letter on the DSEIR, this measure should be retained. There is simply no basis for removing it, especially given the Port's history of noncompliance with mitigation measures and the fact that throughput projections have exceeded the projections in the 2008 EIR. Further, contrary to the Port's suggestions otherwise, neither LM AQ-22 (Periodic Review of New Technology Regulations) nor LM AQ-1 (Cleanest Available Cargo Handling Equipment) are adequate substitutes for the throughput tracking measure, for the reasons we stated in our previous letter.

NRDC-39

This measure should be retained because the Port has never claimed it is infeasible. Further, it should be amended to reflect annual evaluations, and be compared to emissions analysis contained in the RDSEIR (subject to the recommended revisions noted in this letter) as opposed to the 2008 EIR/EIS.

III. Additional mitigation measures are available to reduce the project's significant operational emissions

The RDSEIR concludes that the Revised Project will result in the following new or substantially more severe significant and unavoidable impacts compared to the Approved Project:

- Revised Project emissions of carbon monoxide (CO) would be significant in analysis years 2012, 2014, 2018 and 2023. Emissions of nitrogen oxides (NOx) would be significant in analysis years 2014, 2018, 2023, 2030 and 2036. Emissions of volatile organic compounds (VOC) would be significant in analysis years 2014 through 2045. Emissions of all other criteria pollutants would be less than significant.
- Revised Project ambient concentrations would be significant for federal 1-hour NO2 in 2014 and 2018, state 1-hour NO2 in 2014, annual NO2 in 2014 and 2018, 24-hour PM10 in 2014 through 2045, and annual PM10 in 2014 through 2045. Impacts of SO2, CO, and PM2.5 would be less than significant.
- Cancer risks of the Revised Project relative to the floating Future Baseline would be significant for residential, sensitive, and occupational receptor types. Cancer risks relative to the static baseline would be less than significant. Chronic and acute non-cancer health impacts and cancer burden would be less than significant.

NRDC-40

RDSEIR 3.1-4. As noted above, had the RDSEIR's air quality analysis been accurately performed, we believe that the Revised Project's significant air quality impacts would be larger in scope and severity. *See supra* Section I.

In any event, the RDSEIR's finding of significant impacts, triggers the duty to consider and adopt all feasible mitigation prior to project approval. Cal. Pub. Res. Code §§ 21002; 21061.1. Contrary to CEQA, the RDSEIR narrowly revises mitigation for select source categories, and fails to set forth a broader range of strategies that could reduce operational emissions. In addition, the RDSEIR makes no attempt to consider any measures to offset the excess emissions experienced by the community due to the Port's failure to fully implement the measures in the 2008 EIR. Stated differently, while the RDSEIR offers revised measures for the mitigation the Port did not adopt, this fact alone does not demonstrate CEQA compliance. The RDSEIR must demonstrate that all feasible mitigation for the project's operational air quality impacts (past, present, and future) will be adopted. Cal. Pub. Res. Code §§ 21002; 21061.1. This analysis is broader than the RDSEIR's narrow re-evaluation of seven specific mitigations from the 2008 EIR.

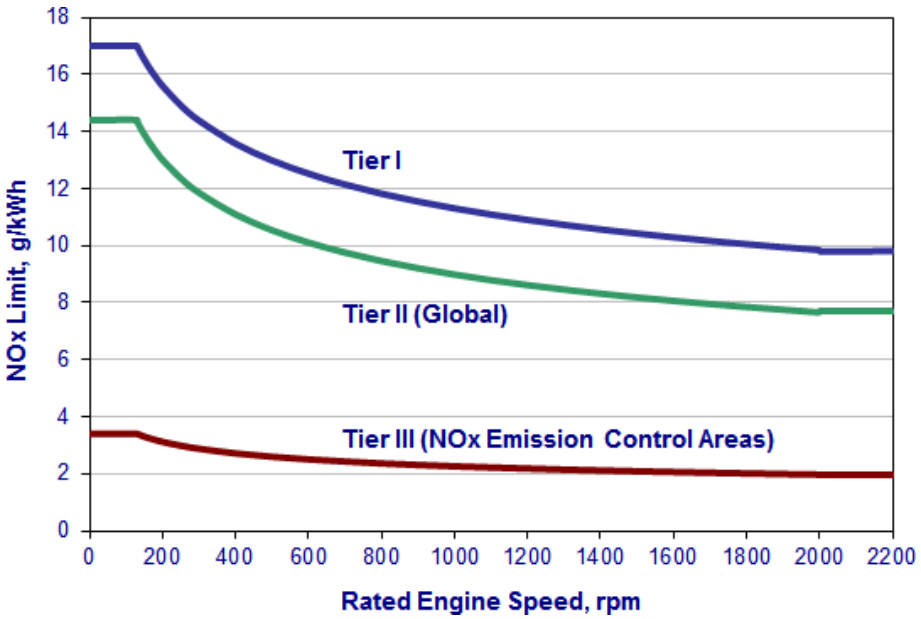
NRDC-41

A. Rerouting cleaner ships

The 2008 EIR included a measure (MM AQ-13) that attracted newer, cleaner vessels to the project. MM AQ-13 stated "When scheduling vessels for service to the Port of Los Angeles, Tenant shall ensure that 75 percent of all ship calls to the Berth 97-109 Terminal meet IMO MARPOL Annex VI NOX emissions limits for Category 3 engines."[117] The RDSEIR indicates that the Port is in full compliance with this measure,[118] which encouraged Tier 1 vessels to call at the terminal.

Since the adoption of MM AQ-13, the IMO has established cleaner engine standards for ships that reduce NOx emissions. Tier 2 engines, which were required to be installed on new ships beginning in 2011, are 15% cleaner than the previous generation of engines, and Tier 3 engines, which were available beginning in 2016, are 75% cleaner than Tier 2 vessels.[119] The following diagram depicts the emissions benefits of using Tier 2 and Tier 3 vessels over Tier 1.

MARPOL Annex VI NOx emission limits[120]



The RDSEIR should consider measures that would encourage the rerouting of Tier 2 and Tier 3 vessels to Berths 97-109 by requiring a certain percentage of such vessels to call at the terminal by a certain date, with increased percentages over time. The Port's ability to successfully

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[117] FEIR Mitigation and Monitoring Program.
[118] RDSEIR at Table 2-1 (limiting noncompliance to the 10 mitigation measures and one lease measure identified in Table 2-1).
[119] Final CAAP Update 2017 at 65.
[120] International IMO Marine Engine Regulations, *available at* https://www.dieselnet.com/standards/inter/imo.php (Attachment G5).

implement its previous "rerouting cleaner ships" measure (MM AQ-13) indicates that such measures can and should be considered.

In 2016, 19% of vessel calls to San Pedro Bay were made by Tier 2 ships, and were mostly larger container vessels.[121] And in 2025, due to forecasted fleet turnover, the Port projects that roughly 65% of total vessels calls will be by container vessels that meet Tier 2 standards.[122] The RDSEIR should take such information into account to determine how to accelerate the pace of cleaner ships visiting the China Shipping terminal. The precise percentages and dates in which cleaner ships should be phased-in could have been subject to a feasibility assessment in the RDSEIR.

Further, while we understand that the Port does not project the first Tier 3 ship to visit the San Pedro Bay Ports until 2026 (at the earliest),[123] the Revised Project consists of a 40-year lease that will extend until 2045.[124] Accordingly, the Project's long life provides an opportunity for the Port to encourage Tier 2 *and* Tier 3 ships at the terminal before 2045.

NRDC-41

The Revised Project should include measures that require the rerouting of cleaner ships to the China Shipping terminal as a method for reducing ship emissions, which is consistent with the direction of the Final CAAP Update 2017, and recent CARB recommendations.[125] As the Port is aware, ships are the largest source of maritime goods-movement-related NOx emissions, comprising 51% of the San Pedro Bay Ports total NOx emissions in 2016. Of those ship emissions, more than half are associated with ships transiting or maneuvering within approximately 100 nm of the ports.[126] As documented by the diagram above, encouraging cleaner vessels to visit Berths 97-109 would reduce operational emissions, and by significant amounts. For these reasons, the RDSEIR should have considered how it can encourage cleaner vessels to visit the project. Otherwise, it is leaving unmitigated operational emissions on the table in violation of CEQA.

B. Funding mitigation programs

NRDC-42

The Port should also consider contributing grant funds to air pollution mitigation programs, including those that could be administered by the Harbor Community Benefit Foundation, and Technology Advancement Program. Such programs could fund, for example, additional air filtration systems and maintenance for existing systems, vegetation buffers for sensitive receptors, or zero emission technologies, and thus "avoid[]," "minimize[e]," "rectify[],"

[121] Final CAAP Update 2017 at 67.
[122] *Id.* at 69.
[123] *Id.* at 68.
[124] RDSEIR at 2-2.
[125] Final CAAP Update 2017 at 67-70; CARB Comments on Everport DEIR at 4 (Attachment E6).
[126] Final CAAP Update 2017 at 65.

"reduc[e]," and/or "compensat[e]" for the community's long-term exposure to the project's operational emissions. CEQA Guidelines § 15370.

NRDC-42

By way of example, to help reduce air quality impacts from the Port of Long Beach's Middle Harbor Project, that port required the project to fund the "Schools and Related Sites Guidelines for the Port of Long Beach Grant Programs and Healthcare and Seniors Facility Program Guidelines for the Port of Long Beach Grant Programs in the amount of $5 million each."[127]

C. Increasing use of on-dock rail

The RDSEIR states that "[t]he CS Terminal generates train trips to and from the on-dock rail yard (WBICTF) [West Basin Intermodal Container Transfer Facility]." RDSEIR at 3.1-33. Moving goods via on-dock rail can reduce cargo movements by trucks and cargo handling equipment, mitigate associated emissions, and minimize traffic in neighboring communities. The Final CAAP Update 2017 states that "[o]ver the long term, the Ports will seek to handle 50% of all cargo leaving the port complex by rail." Final CAAP Update 2017 at 73. We support this goal.

NRDC-43

The RDSEIR however, indicates that the China Shipping terminal is nowhere near this goal. RDSEIR Table 2-3 indicates that the terminal will utilize less on-dock rail than predicted in the 2008 EIR, and that the percentage of TEUs moved by on-dock rail are far less than the CAAP's 50% goal.[128] The RDSEIR should set forth—as a lease measure—that at least 50% of all cargo handled at the China Shipping terminal utilize on-dock rail. Given the terminal's access to on-dock rail facilities, the Port's larger on-dock rail goals, and CEQA's mandate that all feasible mitigation be considered and adopted for significant impacts, the Revised Project must include on-dock rail as a mitigation measure.

D. Accelerating the turn-over of harbor craft

The RDSEIR estimates that two tugboats will assist each arrival/departure of a container ship. RDSEIR at 3.1-32. The RDSEIR predicts 156 vessel calls per year in 2030. RDSEIR, Table 2-3. This will generate 624 tugboat assists (4 tugboats x156 vessel calls). The RDSEIR does not consider any measures for this emission source.

NRDC-44

At a minimum, the RDSEIR should analyze the measures that the Port is already analyzing in the Final CAAP Update 2017 for harbor craft and consider how such measures can be adopted at the China Shipping terminal.[129] The Final CAAP states:

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[127] Port of Long Beach Middle Harbor Project FEIR at ES-33 (April 2009) (Attachment C12). Long Beach proposed something similar for its proposed (but not adopted) Pier S Project. Port of Long Beach Pier S Project FEIR at ES-35–36 (November 2012) (Attachment C15).
[128] The 2008 EIR predicted 17-20% of TEUs to be moved by on-dock rail between 2015-2045; the RDSEIR predicts 14-15% of TEUs moved by on-dock rail between 2018-2045, with 19-27% of TEUs actually moved by on-dock rail in 2008-2014. RDSEIR Table 2-3 at 2-13.
[129] Final CAAP Update 2017 at 71-72.

NRDC-44

> To stimulate the identification, demonstration, and validation of technologies that can achieve emissions reductions from harbor craft beyond current state and federal regulation, the Ports will seek proposals for harbor craft technologies that have the potential to achieve NOx and DPM emission levels cleaner than Tier 4 standards, or technologies that can be retrofitted to existing harbor craft to achieve Tier 3 or Tier 4 emission levels through the following action:
>
> - Issue a Request for Proposals for harbor craft emission-reduction technologies by December 2017 with demonstrations to begin no later than mid-2018.
>
> . . . Additionally, the Ports propose the following strategies to reduce harbor craft emissions and fuel consumption:
>
> - Provide incentives for harbor craft operators to upgrade to the cleanest available (i.e. Tier 4) engines or low-emission hybrid systems in the short term, and to upgrade with advanced technologies (e.g. fuel cells and alternative fuels) in the long term. Incentives could be given through securing grants from federal, state or local agencies, a formal incentive program with financial rewards, or through more favorable lease terms, where applicable, for harbor craft operators that have cleaner fleets.
> - Identify operational changes that could reduce emissions, for example, by reducing the wait time or slow speed movements of assist tugboats while they are waiting to assist a vessel or by optimizing tugboat berth locations to minimize unnecessary travel.
> - As leases with harbor craft operators are opened or renegotiated, the Ports will assess whether it is possible to include requirements for harbor craft modernization, subject to the requisite negotiation process. Many harbor craft companies operate on private land and do not have leases with the Ports; however, the Ports will seek opportunities as they arise.

Accordingly, for example, the Port should consider issuing an RFP for harbor craft technologies that have the potential to achieve NOx and DPM emission levels cleaner than Tier 4 standards, and that can be dedicated to (or substantially serve) the China Shipping terminal. The RDSEIR should also consider a measure that would offer incentives to harbor craft operators that serve the China Shipping terminal to upgrade to the cleanest available (i.e. Tier 4) engines or low-emission hybrid systems in the short term, and incentives to upgrade with advanced technologies (e.g. fuel cells and alternative fuels) in the long term.

E. Accelerating the turn-over of locomotives

NRDC-45

The RDSEIR indicates that "[t]he CS Terminal generates train trips to and from the on-dock rail yard (WBICTF) as well as near- and off-dock rail yards." RDSEIR at 3.1-33. Further, "[e]missions associated with hauling containers by rail include diesel exhaust from PHL locomotives performing switching activities at the on-dock rail yard, Class 1 switch locomotives

performing switching activities at the near- and off-dock rail yards, and line-haul locomotive emissions used during transport within the SCAB and idling at the rail yards. RDSEIR at 3.1-33.

The 2008 FEIR included MM AQ-18 to reduce locomotive emissions, which required, "[b]eginning January 1, 2015, all yard locomotives at Berth 121-131 Rail Yard that handle containers moving through the Berth 97-109 terminal shall be equipped with a diesel particulate filter (DPF)." Mitigation Monitoring and Reporting Program at 2-18. The FEIR committed to incorporating the measure into PHL's (Pacific Harbor Line) lease. *Id.*

Despite the RDSEIR's recognition that locomotives contribute to the project's operational emissions, and Port's history in reducing such emissions from the project (the RDSEIR does not take the position that MM AQ-18 is infeasible),[130] the RDSEIR does not consider any new mitigation for locomotives.

NRDC-45

The RDSEIR indicates that "the active PHL switcher locomotive fleet in 2014 consisted of a combination of Tier 3-plus and genset locomotives and were assumed to be converted to Tier 4 locomotives in future years on a 30-year or 15-year repower schedule, respectively." RDSEIR at 3.1-33. The Port should consider and set forth a mitigation measure that would accelerate the turnover of PHL's switcher locomotives that handle containers moving through Berths 97-100, so that conversion to Tier 4 locomotives happens sooner than 15 to 30 years from now. The Port's previous success in ensuring PHL's locomotives were equipped with DPFs demonstrates the Port's ability to work with other lease holders to secure emissions reductions from the project.

The RDSEIR should also consider measures to reduce emissions from line-haul emissions. The RDSEIR states that the San Pedro Bay Ports Clean Air Action Plan has a goal of ensuring all Class 1 locomotives entering the ports meet emissions equivalent to Tier 3 locomotives by 2023. RDSEIR at 3.1-27. The RDSEIR should have discussed how the Revised Project is consistent with that goal, explained how the Port is working with the railroads to achieve those reductions, and considered ways to, for instance, incentivize or require the use of cleaner locomotive technologies through lease agreements as rail use increases at the China Shipping terminal.[131]

F. The RDSEIR should consider "smart" logistic systems

NRDC-46

In addition to reducing tailpipe and smokestack emissions to reduce operational emissions, the project can also enhance operational efficiencies to reduce air pollution. The RDSEIR should consider smart logistics systems, including but not limited to the Freight Advanced Traveler Information System (FRATIS), which is an intelligent transportation system that analyzes data

[130] *But see* NRDC Comments on DSEIR (September 29, 2017) at 21 (raising concerns over whether the Port complied with MMAQ-18).
[131] *See* CARB, Technology Assessment: Freight Locomotives (Nov. 2016), *available at* https://www.arb.ca.gov/msprog/tech/techreport/final_rail_tech_assessment_11282016.pdf (containing information about cleaner locomotive technologies) (Attachment E11).

from multiple sources to propose the most efficient routes and schedules for drivers, dispatchers and cargo owners.

NRDC-46 We understand that the Port was planning to conduct a demonstration project using FRATIS in late 2017. Final CAAP Update 2017 at 80. The RDSEIR should have discussed the results of this demonstration project and considered incorporating FRATIS or other measures to enhance operational efficiencies and reduce emissions. *See* EPA Comments on Everport DEIR (June 5, 2017) (Attachment E7). Relatedly, the RDSEIR should evaluate the intelligent logistics systems employed at the Port of Long Beach Middle Harbor Project and at the Port's own Trapac terminal, and consider how such systems can be used at the China Shipping terminal.

G. Additional measures

NRDC-47 In addition to the measures described above, the RDSEIR should consider whether there are additional measures that can be adopted to reduce the Project's air quality impacts, including but not limited to measures that reduce emissions generated by refrigerated shipping containers, including methods for plugging such containers into power. The RDSEIR should also consider if there are additional idling restrictions or enforcement measures that can be applied to reduce idling from trucks, locomotives, and harbor craft. *See, e.g.*, Final CAAP Update 2017 at 58-59. In short, the Revised Project must consider measures that can cut pollution from every emissions source operating at the terminal.

IV. The RDSEIR must enhance its mitigation monitoring and enforcement program

As we explained in our September 29, 2017 comments, the management failures that led to the current China Shipping situation must never recur. Yet, the Port still appears to incorporate the same program that proved ineffective in monitoring and enforcing the 2008 mitigation measures.[132] To ensure that mitigations are actually implemented and monitored for compliance, we reiterate our recommendations:

NRDC-48

1. A full public accounting of why the lease with China Shipping was never amended to include the 2008 measures, and why waivers were granted from AMP. A full understanding of what led to the current predicament is essential to ensuring any future mitigation and monitoring program does not repeat past mistakes.

2. Ongoing public disclosure of the status of all mitigation measures for all past and present Port CEQA projects. A third party—agreeable to the Port and the community—should be selected to oversee this monitoring reporting process. The reporting plan should include, at a minimum:

[132] *Compare* RDSEIR at 3.1-76 to 3.1-78 *with* FEIR Mitigation, Monitoring and Reporting Program at 2-13 to 2-22. Both mitigation monitoring programs primarily consist of the Port including the mitigations in China Shipping's lease agreement.

- An assessment of mitigation compliance based on on-site visits, interviews, data from the drayage truck registry, and review of equipment and vehicle inventories.

- Throughput tracking to determine if actual throughput exceeds the projections in previously certified EIRs. In years when throughput exceeds projections, an assessment of excess emissions attributable to that throughput should be performed, as well as a plan to deal with those excess emissions.

NRDC-48

- Ongoing assessment and implementation of cleaner technologies and practices that can be implemented at the terminals.

3. Creation of a permanent and independent oversight committee, funded to conduct audits of the implementation of all committed mitigation measures, port-wide. The committee could be modeled after the disbanded Port Community Advisory Committee (PCAC). The committee's work should be coordinated with the work of the third-party monitor.

V. The RDSEIR'S analysis of increased greenhouse gas emissions is legally inadequate and relies on illusory mitigation measures

Climate change is probably the most significant environmental problem that the United States faces. California has led the nation for years in its efforts to fight climate change, requiring deep cuts in greenhouse gas emissions by 2020 and later. Ignoring this, the RDSEIR admits that the revised project will cause an *increase* in greenhouse gas emissions and relies on illusory mitigation measures that, even by the Port's calculation, will not return greenhouse gas emissions to baseline, much less decrease them. This is unconscionable and invalid as a matter of law.

New Table 3.2-3 shows operational GHG emissions for the revised project well in excess of local thresholds of significance for all years through 2045. The accompanying text states:

> Table 3.2-3 shows that the Revised Project's GHG emissions minus the 2008 Actual Baseline would exceed the GHG threshold of 10,000 mty in all of the study years.

NRDC-49

These numbers are probably low for the same reasons that the air quality numbers are low. But even so, the Port punts on its legal requirement for GHG mitigation:

> GHG emissions would be significant and unavoidable after mitigation for the Revised Project for every analysis year (2012, 2014, 2023, 2030, 2036). Page 3.2-53.

Indeed, the only mitigation measures proposed are LED lighting and a carbon offset fund, without any restrictions on where offsets may come from. This puny attempt at mitigation ignores what is now feasible at TraPac and Middle Harbor (Long Beach) and in large projects such as the Newhall Ranch development in northern Los Angeles County, which is premised on zero net GHGs and zero net energy. *See, e.g.*, https://netzeronewhall.com/. The China Shipping project and all new Port projects need to meet the zero net GHG standard.

VI. The RDSEIR fails to include mitigation measures suggested by the analysis under Appendix F

NRDC-50

The RDSEIR contains an analysis of the energy conservation factors required to be included under CEQA Guidelines Appendix F. This analysis focuses on the increased use of hydrocarbon fuels, described as diesel equivalent gallons (see page E-4), and is keyed off Port projections of future throughput growth. Not surprisingly, given the Port's failure to commit to zero emission mitigation measures, use of hydrocarbon fuels is projected to grow.

This failure again ignores the portion of Appendix F that requires that: "Alternatives should be compared in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy." Particularly where mitigation measures are concerned, the Port needs to consider and implement zero emission alternatives for all aspects of the China Shipping operation, including in-yard container movement and intra-port drayage. The goal here should be a zero net GHG and zero net energy facility, not business as usual.

THE DISCRETIONARY DECISION BEFORE THE BOARD OF HARBOR COMMISSIONERS

NRDC-51

For the reasons stated above, the RDSEIR must be revised and recirculated. Once the CEQA document discloses the project's significant effects (including retrospective and prospective impacts), the Board of Harbor Commissioners must adopt all feasible mitigation. This could include enforcing some or all the 2008 EIR's measures, and/or revising the project to add new feasible measures. We have provided a number of technologies the Port must consider, and that are aligned with the City and Port's zero emission goals.

NRDC-52

Again, because the record shows that China Shipping has no interest in complying with the mitigation measures in the 2008 EIR, we recommend that the Board terminate the lease with China Shipping and find a tenant that can comply with CEQA, and partner with the City in fulfilling its zero emission goals. Absent that, it is difficult to see how the Port will comply with CEQA or meet its project objectives to grow the terminal sustainably.

Sincerely,

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Natural Resources Defense Council

David Pettit
Natural Resources Defense Council

Jaclyn H. Prange
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Enclosures:
Index of additional documents supporting these comments
Copies of additional documents

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Index of Attachments in Support of NRDC, et al.'s Comments on the DSEIR for the China Shipping Project (9/29/17) and Comments on the RDSEIR for the China Shipping Project (11/16/18)

Note: Documents added to this index in support of NRDC's comments on the RDSEIR are italicized. All other documents listed in this index were submitted with NRDC's comments on the DSEIR and support both sets of comment letters.

A - Public Records Act Documents

B - China Shipping Litigation and Related Documents

C - San Pedro Bay Port Studies and Assessments

D - City and State Documents

E - Agency Studies and Assessments

F - Academic and Other Independent Studies

G - Rules, Regulations, and Resolutions

H - Miscellaneous Press Statements and News Articles

I - Sonoma Technology, Inc Report and References

J - Press Statements and Data from Technology Manufacturers

K - Sustainable Systems Research, LLC Report

Response to Comment NRDC-1

NRDC's comment letter on the DSEIR is designated Comment Letter 14, and the LAHD's responses to the comments contained therein are presented below.

Response to Comment NRDC-2

The comment is general and does not reference any specific section of the Recirculated DSEIR; therefore, no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)). Subsequent comments presenting specific concerns are responded to below.

Response to Comment NRDC-3

The "analysis by an independent expert" that is summarized in this comment constitutes Comments NRDC.K1-1 through NRDC.K1-7; the LAHD's responses to those comments are provided below. The Recirculated DSEIR does discuss the health effects of the types of air pollutants associated with the Revised Project (Section 3.1.2). The Final SEIR contains a more detailed discussion (Section 3.2.3.1) of the links between air pollutant concentrations and public health.

Response to Comment NRDC-4

The Port is committed to imposing all feasible mitigation on the Revised Project. CEQA does not require that all impacts be reduced to a less-than-significant level by mitigation, but rather that they be mitigated to the extent feasible (see *Sierra Club v. County of Fresno* (2018) 6 Cal.5th 502); certain projects cannot reduce all impacts to a level of less than significant, and lead agencies must decide whether or not to approve the project with a statement of overriding conditions.

With regard to failure to mitigate past, current, and future emissions as a result of non-compliance, refer to Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures.

The LAHD disagrees with the comment's statement that "[t]he Port has not shown that the mitigation measures it adopted in 2008 are now infeasible." The Recirculated DSEIR contains lengthy discussions of the feasibility of each of the mitigation measures considered in the Revised Project, including the feasibility of the original measure (Section 2.5.2.1). The comment's statement shows that the NRDC disagrees with the LAHD's conclusions, but the comment does not contain any factual material to support the statement. Furthermore, the Recirculated DSEIR does consider the additional measures suggested by the comments of NRDC and others to the extent that they are relevant to the Revised Project and are deemed feasible under CEQA.

The Recirculated DSEIR considers zero-emission drayage trucks and finds them infeasible as a measure to be imposed on a single terminal (Section 2.5.2.1). It considers zero-emissions cargo-handling equipment and finds that the types of such equipment that could be deployed at the CS Terminal without extensive, prohibitively expensive modification of the terminal and purchase of new equipment are not yet commercially available or proven for container terminal service (sections 2.5.2.1 and 3.1.4.4, AQ-3; see also Master Response 2: Zero- and Near-Zero-Emission Technologies). It considers OGV engine emission reduction measures and finds that the Port cannot impose specific technologies on OGVs (Section 3.1.4.4, AQ-3). The mitigation measures that constitute the Revised Project will be enforceable by incorporation into the terminal lease. CEQA

does not require, and the Revised Project does not include, establishment of a formal system for community oversight of mitigation implementation.

The mitigation measures proposed in the Recirculated DSEIR are consistent with the goals and policies outlined in the 2017 CAAP and with the zero emission goals of the mayor and of the Port. They require the CS Terminal to implement feasible technologies in the near future and commit the terminal to adopting proven zero-emission technologies as those become commercially available and economically feasible.

The statement in footnote 2 that "[i]f TraPac can operate this way under a Port of Los Angeles lease, so can China Shipping" is misleading and untrue. In fact, the zero-emission technologies in use at the Trapac terminal cited by the comment are only possible because of a massive reconstruction of the terminal specifically designed for that purpose and costing several hundred million dollars (the LAHD's cost estimate for a similar reconstruction at the CS Terminal is $396 million, which does not include the costs of new equipment purchase or business disruption during construction). As zero-emission technologies appropriate to the CS Terminal mature and the current-generation of cargo-handling equipment at the CS Terminal becomes due for replacement, the LAHD expects zero-emission technologies to be installed at the CS Terminal, including development of projects to construct the infrastructure necessary to support those technologies.

Please see Master Response 1: Feasible Mitigation – Guidance and Applicability and Master Response 2: Zero- and Near-Zero-Emission Technologies for detailed discussions of the factors that determine feasibility and of the current status of zero emission technologies. Responses to comments about specific mitigation measures are provided below.

Response to Comment NRDC-5

The Port is committed to imposing all feasible mitigation on the Revised Project. CEQA does not require that a supplemental EIR for proposed changes to a previously approved project must assess mitigation to reduce or avoid impacts of the project that occurred prior to approval of the proposed changes. Nevertheless, for informational purposes only, the Recirculated DSEIR does disclose emissions that occurred between 2008 and the present due to incomplete implementation of mitigation from the 2008 EIS/EIR (see Table 3.1-11.) See also Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures and Master Response 5: Comparative Emissions.

The LAHD takes its responsibilities under CEQA and its commitment to sustainable development seriously. While LAHD has moved the SEIR forward with all deliberate speed, NRDC is aware that CEQA analysis for any project takes time and corners should not be cut. Due to the unique issues raised for this project, the SEIR's analysis has been particularly multifaceted, and early on in the CEQA process LAHD disclosed to NRDC that the SEIR could take significant time to complete. Indeed, in recognition of the complex nature of the SEIR, NRDC requested a 60-day extension of the public comment period for review of the Draft SEIR, and the LAHD granted that request, extending the deadline to September 29, 2017.

After the close of the public comment period, LAHD worked diligently to analyze and address the lengthy comment letters received on the SEIR, including NRDC's detailed 63-page letter. To respond comprehensively to the factual and legal questions and concerns raised in the comments on the SEIR, LAHD had to undertake additional

analysis of the project and to revise the Final SEIR. Per CEQA Guidelines Section 15088.5, LAHD recirculated a revised Draft SEIR to provide the opportunity for public review of and comment on this new information and analysis. The LAHD received additional comments on the Recirculated DSEIR, including a 48-page comment letter with attached technical analysis from NRDC, and has worked diligently to respond to those comments.

LAHD acknowledges NRDC's plea for prompt completion of the SEIR process, but speed should never come at the expense of good planning and comprehensive environmental analysis. LAHD continues to work diligently to complete the environmental review of the Revised Project and ensure full compliance with CEQA and its public disclosure obligations.

Response to Comment NRDC-6

As explained in section 2.6.1.1 of the Recirculated Draft SEIR, CEQA provides for an EIR to assess the significance of a project's impacts in comparison to a baseline that consists of existing physical environmental conditions at or near the project site. Baseline conditions are normally measured at the time of commencement of environmental review; however, the lead agency has discretion to decide exactly how, and in which time period, existing conditions can most realistically be measured. Furthermore, under CEQA, the purpose of a supplemental EIR is limited to determining whether proposed changes to a previously reviewed project result in environmental impacts that were not already and previously analyzed in a prior EIR. (Public Resources Code § 21166.) Therefore, as discussed in section 2.6.1.1 of the Recirculated DSEIR, a supplemental EIR typically analyzes the impacts of a proposed change to a project compared to a baseline consisting of conditions at buildout of the approved project as analyzed in the prior EIR.

As noted by the commenter, the 2017 DSEIR employed a 2014 baseline, which the DSEIR more precisely defined as "2014 Existing Conditions With Approved Project Mitigation." The DSEIR explained that it employed this "2014 Mitigated Baseline" as the most realistic approximation of China Shipping terminal-buildout conditions that would have existed, at the time of issuance of the NOP for this SEIR (2015), if all mitigation identified in the 2008 EIS/EIR been fully implemented at that time. As further noted by the commenter, in response to comments alleging that the 2017 DSEIR's use of a 2014 baseline ignored the period between project approval in 2008 and 2014, the Recirculated DSEIR employs a modified baseline to identify and determine the significance of the impacts of the Revised Project. The Recirculated DSEIR compares the air quality and GHG impacts of the Revised Project to "2008 Actual Baseline" conditions, based on a determination that in 2008 the terminal was in full compliance with mitigation identified in the 2008 EIS/EIR. Accordingly, the Recirculated DSEIR properly employs as its baseline the conditions as they existed at the earliest possible date before the changes to the previously approved project that are analyzed in this SEIR, i.e., the same year in which the prior EIR was certified and the original project was approved.

The comment asserts, however, that the Recirculated DSEIR is required to use a baseline different from the 2008 Actual Conditions Baseline, on the grounds that CEQA requires disclosure, analysis, and mitigation of "past and future excess emissions." However, this comment misconstrues CEQA. As discussed in Master Response 5: Comparative Emissions, the term "excess emissions" is not employed or defined in the CEQA statute or guidelines, and the SEIR does not use that term in its analysis. The commenter

appears to have developed the term "past excess emissions" to mean the difference between actual past project emissions and what project emissions would have been at a particular past time if all mitigation identified in the 2008 EIS/EIR had been fully complied with. The commenter likewise appears to use the term "future excess emissions" to mean the difference between anticipated future emissions under the Revised Project, and what project emissions would have been at a particular future time if all mitigation identified in the 2008 EIS/EIR were to be fully complied with.

For informational purposes only, the Recirculated DSEIR does disclose the emissions that occurred between 2008 and the present by comparing, for 2012, 2014, and 2018, the relative emissions of criteria pollutants under the Revised Project (i.e., incomplete implementation of mitigation measures in the 2008 EIS/EIR) to those under the "FEIR Mitigated Scenario" (i.e., estimated conditions under the previously approved project (see Table 3.1-11). An additional table presenting the difference in annual emissions between the two scenarios has been included in Master Response 5: Comparative Emissions to clarify this issue.

The Recirculated DSEIR also discloses "future excess emissions" by presenting similarly comparable data for 2023, 2030, 2036, and 2045 (see Table 3.1-11). However, the "baseline" necessary to identify those "excess emissions" as significant CEQA impacts would necessarily be a baseline that consists of "FEIR Mitigated Scenario" conditions in a range of different past and future years. For example, to determine the impacts of the Revised Project relative to an FEIR Mitigated Scenario baseline in 2023, it would be necessary to use a baseline of FEIR Mitigated Scenario conditions in 2023, whereas to determine impacts of the Revised Project in 2030 would require comparison to a baseline of FEIR Mitigated Scenario conditions in 2030, and so on. There is no requirement under CEQA for a supplemental EIR, evaluating the impacts of a proposed change to an already approved project, to determine the significance of the impacts of the proposed change by comparison to such a CEQA baseline that fluctuates over time.

Furthermore, as shown in Table 3.1-11, the incremental difference between FEIR Mitigated Scenario emissions and past actual emissions (on the one hand) and between FEIR Mitigated emissions and future emissions of the Revised Project (on the other hand) is often, though not always, considerably smaller than the incremental difference between 2008 Actual Baseline emissions and past/future emissions of the Revised Project. Table 3.1-11 shows that peak-day VOC emissions in 2014 under the Revised Project were 328 pounds per day higher than the 2008 Actual Baseline, and that peak-day VOC emissions under the FEIR Mitigated Scenario would have been 299 pounds per day higher than the 2008 Actual Baseline. The "differences between scenarios" column of that table therefore discloses that peak-day VOC emissions in 2014 under the Revised Project were only 29 pounds per day higher than under the FEIR Mitigated Scenario. Therefore, even if CEQA required comparison of the Revised Project to a fluctuating "FEIR Mitigated Scenario" baseline for purposes of impact-significance determination (which it does not), comparison to such a baseline would generally understate the impacts of the Revised Project, relative to the impacts identified and assessed for significance in the Recirculated Draft SEIR in comparison to a 2008 baseline.

Response to Comment NRDC-7

The commenter's assertion that "the Port…violated its commitments in the…Amended Stipulated Judgment" is unrelated to this SEIR: as stated in the Recirculated DSEIR (Section 2.2.3, p. 2-3), "the ASJ requirements are outside the scope of the Revised

Project and are not considered in this Draft SEIR." The Recirculated DSEIR acknowledges the failure fully to implement some of the 2008 EIS/EIR's measures, including MM AQ-9; the Revised Project addresses the measures that were not fully implemented.

The Recirculated DSEIR discloses, and analyzes for significance under CEQA, impacts of the Revised Project in comparison to the 2008 Actual Baseline, including past impacts of incomplete implementation of mitigation measures from the 2008 EIS/EIR. Additionally, as explained in response to Comment Number NRDC-6, the Recirculated DSEIR also discloses, for informational purposes only, past and future "excess emissions," as that non-CEQA term is used by the commenter. *POET, LLC v. State Air Resources* (2017) 52 Cal.App.5th 52 ("*POET II*"), cited by the commenter, does not require a different treatment of past "excess emissions" in this SEIR. *POET II* is inapplicable, since it did not concern supplemental review under CEQA (*POET II*, at 100.) Rather, that case concerned a first-time project EIR that had been prepared, pursuant to previously issued court order, for a project that an earlier court determined to have been improperly approved without environmental review (See *POET, LLC v. California Air Resources Board* (2013) 218 Cal.App.4th 681 ("*POET I*"). Because the Port, by contrast, properly approved the China Shipping Container Terminal Project based on the 2008 EIS/EIR, and because that 2008 EIS/EIR is conclusively presumed valid as a matter of law, the SEIR properly analyzes the significance of air quality and GHG impacts of the Revised Project in comparison to the 2008 Actual Baseline, consisting of conditions at the time of approval of the original project.

Response to Comment NRDC-8

Please see Responses to Comments NRDC-6 and NRDC-7. As a supplemental EIR evaluating impacts of proposed changes to the China Shipping Container Terminal Project that was approved in 2008 on the basis of the 2008 EIS/EIR, the SEIR is limited under CEQA to evaluating the impacts of changes to the original project. Therefore, the SEIR properly discloses and evaluates the air quality and GHG impacts of changes to the China Shipping Container Terminal Project that occurred in the past during the period of non-compliance or are predicted to occur under the Revised Project. The SEIR properly discloses those impacts in the past, short-term future, and long-term future, by presenting data for a range of study years: 2012, 2014, 2018, 2023, 2030, 2036 and 2045. This analysis fulfills the requirements of CEQA, which contains no requirement that an SEIR evaluate impacts in each individual year in which they may occur and does not require an SEIR to evaluate impacts alleged to have occurred prior to approval of the EIR that it supplements.

Furthermore, the comment claims the Port was in noncompliance with approved mitigation measures for many other years going back to 2000-2001. That statement is inaccurate and conflicts with the commenter's statement in Comment NRDC-7 that the Port violated mitigation measures that were set to phase in between 2004 and 2018.

Regarding footnote 4 ("It is not entirely clear, but it appears that the Port based its evaluation of 2018 on predicted actual compliance with mitigation measures"), Table 3.1-1 of Section 3.1 notes that the analysis for year 2018 under the Revised Project assumes actual compliance levels (i.e. partial implementation) of 2008 EIR/EIS mitigations, combined with projected 2018 terminal throughput. At the time of preparation of the Recirculated DSEIR, the full calendar year 2018 activity was not available, so projections were used.

Response to Comment NRDC-9

Please see Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures, and Responses to Comments NRDC-6, NRDC-7, and NRDC-8. Consistent with the requirements of CEQA, the Recirculated DSEIR properly determines the significance of air quality and GHG impacts of changes to the China Shipping Container Terminal Project in comparison to a 2008 baseline that describes conditions at the time of approval of the original project. There is no requirement under CEQA for a supplemental EIR to instead determine the significance of impacts of a proposed change to an already approved project by comparison to a fluctuating baseline that describes, in a number of past and future years, what the commenter refers to as "what should have happened." The commenter asks for comparisons that are not only inconsistent with CEQA but also cannot, strictly speaking, be made. As stated in the Recirculated DSEIR (page 2-28), "in the 2008 Actual Baseline, conditions are modelled using current (2018) methodologies and assumptions, since it is not possible to re-create the methodologies, input data, and other assumptions used in the 2008 EIS/EIR. Changes in analytical and modelling techniques, as discussed in sections 2.6.2 and 3.1, since 2008 have made it unworkable or confusing to analyze impacts in this SEIR using data and techniques employed in the 2008 EIS/EIR."

Nevertheless, for purposes of full informational disclosure, the Recirculated Draft SEIR compares the FEIR Mitigated Scenario (i.e., estimated conditions under the previously approved project) to the 2008 Actual Baseline, using current analytical and modeling techniques, to provide data for an apples-to apples comparison of the Revised Project to the FEIR Mitigated Scenario. The far right-hand column in Table 3.1-11 ("Difference Between Scenarios") discloses, for each of the past and future study years, the quantified amount by which emissions under the Revised Project did or would exceed (or, in some cases, be less than) emissions under the FEIR Mitigated Scenario. An additional table presenting the difference in annual emissions between the two scenarios has been included in Master Response 5: Comparative Emissions to clarify this issue.

The Recirculated DSEIR thus complies with CEQA's requirements for assessing the significance of impacts of changes to the previously approved China Shipping Container Terminal Project, and also discloses supplemental information about those impacts, by showing how actual emissions in past years 2008, 2012, and 2018, and future emissions under the Revised Project, compare to what emissions were or would be under the FEIR Mitigated Scenario.

Regarding footnote 5, Recirculated DSEIR Section 3.1.1 and Table 3.1-1 explain the compliance and activity assumptions and data for each analysis year under each Scenario (Revised Project versus FEIR Mitigated). That section delineates how, under the Revised Project, "past years" are based on actual compliance (i.e., partial implementation) of 2008 EIR/EIS mitigations and "future years" are assumed to comply with Recirculated DSEIR proposed mitigations. The analysis cannot "disentangle" past years and future years under the Revised Project as individual scenarios, regardless of their difference in mitigations and compliance, because the HRA analysis relies on the examination of all study years from the 2008 baseline through 2045. The Final SEIR document reiterates these definitions in Chapter 3 Modifications to the Recirculated DSEIR, as relevant.

Response to Comment NRDC-10

Please see Responses to Comments NRDC-6, NRDC-7, NRDC-8, and NRDC-9. The appropriate baseline for a supplemental EIR is conditions at buildout of the approved

project as analyzed in the prior EIR. For this reason (and to capture the impacts of past partial implementation of mitigation measures from the 2008 EIS/EIR) the Recirculated DSEIR generally compares the air quality and GHG impacts of changes to the China Shipping Container Terminal Project (including TAC impacts to human health other than cancer risk) to a 2008 baseline that describes conditions at the time of approval of the original project. In the special instance of cancer risk impacts, which are analyzed based on much longer exposure periods than other air quality or TAC impacts, the Recirculated DSEIR determines impact significance by comparison to two 2008 baselines: a 2008 Actual Conditions Baseline that uses 2008 activity levels and 2008 emission factors based on actual compliance with 2008 EIS/EIR mitigation measures at that time, and a "floating Future" 2008 baseline that also uses 2008 activity levels but uses emission factors projected over 25-, 30-, and 70-year exposure periods, to incorporate the future effects of existing air quality regulations. The approach of using two 2008 baselines to assess the significance of cancer risk analysis is conservative, as the floating Future 2008 Baseline describes lower emissions over time than does the static 2008 Actual Baseline, and therefore results in disclosing higher incremental cancer risk impacts. As a result, the Recirculated DSEIR discloses significant cancer risk impacts in comparison to the floating Future 2008 Baseline that would be less than significant in comparison to the static 2008 Actual Baseline alone.

The commenter states that "…the Port should compare what should have happened in past years to what actually happened in those same past years." The Recirculated DSEIR does just that, for informational purposes only, by disclosing the corresponding incremental health risk of both the Revised Project and the FEIR Mitigated Scenario (i.e., estimated conditions under the previously approved project) relative to the 2008 Actual Baseline and the floating Future 2008 Baseline. The FEIR Mitigated Scenario represents "what should have happened", while the Revised Project represents "what actually happened" (although for cancer risk the evaluations span both past and future years because of the 30-year residential and 25-year occupational exposure periods). Therefore, to understand "what should have happened" as compared to "what actually happened/will happen", the reader can compare Table 3.1-20 (what should have happened) to Table 3.1-18 (what actually happened), Table 3.1-21 (what should have happened) to Table 3.1-19 (what actually happened/will happen), and Figure B3-7 in Appendix B3 (what should have happened) to Figure 3.1-2 (what actually happened/will happen).

Note, however, that unlike emissions impacts, the cancer risk impacts of the Revised Project and the FEIR Mitigated Scenario cannot be directly compared, as such impacts are assessed at the particular location of the maximum impact (i.e., Tables 3.1-18 and 3.1-20), and the most-impacted location under one scenario is almost certain to be different than the most-impacted location under the other scenario. This analytical feature, inescapable in assessment of cancer risk impacts, means that even if CEQA required the SEIR to determine impact significance in comparison to the FEIR Mitigated Scenario (which it does not), such a comparison would be confusing and potentially misleading in the instance of cancer risk impact assessment.

Response to Comment NRDC-11

Please see Responses to Comments NRDC-6, NRDC-7, NRDC-8, and NRDC-9. The case cited in the comment, *American Canyon Community United for Responsible Growth v. City of American Canyon* (2006) 145 Cal.App.4th 1062, does not support the commenter's contention that the Recirculated DSEIR is required to compare the impacts

of changes to the China Shipping Container Terminal Project to a baseline earlier than 2008, when the original project was approved, nor to a fluctuating baseline consisting of "levels of pollution that would have occurred under the previously approved project" in various past and future years, i.e., the FEIR Mitigated Scenario. That case concerned a project for which supplemental CEQA review should have been prepared but was not. The case does not address the requirements of CEQA concerning the appropriate baseline for supplemental CEQA review.

Response to Comment NRDC-12

Please see Responses to Comments NRDC-6 through NRDC-9 and NRDC-11.

Response to Comment NRDC-13

Please see Response to Comment NRDC-10.

Response to Comment NRDC-14

The purpose of the Recirculated DSEIR is to analyze the continued operation of the CS Terminal under new and/or modified mitigation measures. The Recirculated DSEIR will be used by LAHD, as the lead agency under CEQA, in making a decision regarding actions required to lease and operate the Revised Project. If it is determined that changes to existing mitigation measures are recommended as a result of the Recirculated DSEIR, the Board of Harbor Commissioners will consider amending the lease for operations at Berths 97-109 to include those measures. Accordingly, to determine the impacts of the Revised Project, the Recirculated DSEIR has to analyze the operations under the projected new lease measures.

The comment correctly points out that the actual date for the implementation of the mitigation measures is, for various reasons, uncertain. However, the analyses had to assume some start date in order to proceed, and at the time of SEIR preparation 2019 was a reasonable assumption. CEQA does not require certainty, but instead urges lead agencies to make reasonable assumptions (Public Resources Code § 15384(b)) and use best available data and professional judgment, which is what the LAHD did in this case. It is reasonable for LAHD to assume that the Revised Project will include a new lease with the measures analyzed in the Recirculated DSEIR. Since the comment does not offer an alternative assumption, is general in nature, and does not reference any specific section of the Recirculated SDEIR, no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment NRDC-15

The comment appears to disagree with the Recirculated DSEIR's use of EMFAC2017 to estimate LNG-fueled drayage truck emissions, preferring instead test data from UC Riverside and CARB. Those data were produced by test-cycle protocols that are not speed-specific, meaning that one number would represent a wide range of speeds and therefore engine loads. LAHD disagrees with the use of such data to characterize the emissions of LNG-fueled drayage trucks. In the Recirculated DSEIR, the running exhaust emissions for drayage trucks serving the CS Terminal are calculated on a link-level-specific speed basis for each road link of the network, modeled to represent typical daily routes and speeds. Moreover, the emission factors used in the analysis represent the age distribution of the port-wide drayage fleet in each analysis year, that is, the emission factors take into account emission deterioration effects for each age group of vehicles in the yearly mix. The data cited by the commenter do not include deterioration effects.

The LAHD used the latest CARB approved model, EMFAC2017, for calculating speed-based running exhaust emission rates for drayage trucks operations on the road. EMFAC2017 does not contain assumptions for LNG-fueled heavy-duty trucks; the only LNG-fueled vehicles included in the EMFAC2017 model are CNG-fueled transit buses (CARB, 2018, p. 16), which do not accurately represent the technology and operations of drayage trucks. Therefore, for lack of a better surrogate emission rate, LAHD conservatively assumed that NOx and other pollutants rates, other than diesel-particulate matter (DPM), would be equivalent between LNG-fueled and diesel-fueled drayage trucks. DPM is an essential pollutant evaluated for health risk analysis and it was assumed that LNG-fueled trucks generate 95% lower DPM emissions than diesel-fueled trucks (compression ignition LNG-fuel is typically a mixture of 5% diesel, 95% LNG). As suggested by the commenter, to use test-cycle "emission standards" that represent a wide range of speeds, do not account for deterioration, and are not in units related to real-life activity, such as grams-per-mile, alongside the detailed emission factors that CARB's approved model (EMFAC2017) provides would produce a distorted representation of LNG truck emissions under this analysis.

With respect to OGV emissions for years 2023-2045, the commenter correctly points out that the analysis is unclear. The analysis has been revised in the Final SEIR to present the peak-day emissions for OGVs at berth under the Revised Project scenario for years 2023-2045 without AMP usage, to reflect the difference in mitigation against the FEIR Mitigated scenario peak-day OGV emissions at-berth, which are assumed to use AMP. Please see Response to Comment SCAQMD-26 for more detail.

Response to Comment NRDC-16

The comment is general and does not reference any specific section of the Recirculated DSEIR; therefore, no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)). The comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

Response to Comment NRDC-17

Please see Responses to Comments NRDC.K1-1 through NRDC.K1-7 for LAHD's responses to the SSR study. Please see Response to Comment NRDC-15 related to the Recirculated DSEIR's appropriate use of EMFAC emission factors for LNG-fueled engines. Please see Response to Comment NRDC-6 related to the appropriate baseline under CEQA.

The LAHD disagrees with the comment's contention that the Recirculated DSEIR may undercount past emissions by failing to disclose mitigation non-compliance that the commenter speculates may have occurred prior to 2008. First, the SEIR for the Revised Project is not required by CEQA to assess the significance of environmental impacts that are alleged (without evidence) to have occurred prior to certification of the 2008 EIS/EIR. Additionally, as explained in Section 2.2.3 and Table 2-1 of the Recirculated DSEIR, only one of the requirements of the mitigation measures in the 2008 EIS/EIR took effect before 2008; accordingly, it is not possible that non-compliance could have occurred before 2008 in any but that one provision. One provision of MM AQ-17 related to the ASJ (alternative fuel and DOCs in CHE) took effect in late 2004, and that provision was complied with. Accordingly, there are no "excess emissions," as the non-CEQA term is used by the commenter, from years prior to 2008.

Response to Comment NRDC-18

The Recirculated DSEIR does discuss the health effects of the types of air pollutants associated with the Revised Project (Section 3.1.2). The Final SEIR contains a more detailed discussion (Section 3.1.4.4) of the links between air pollutant concentrations and public health. The remainder of the comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)). The comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

Response to Comment NRDC-19

Please see Response to Comment SCAQMD-28.

Response to Comment NRDC-20

The comment provides a legal argument regarding CEQA provisions and case law governing mitigation measures, and a summary of the arrangement of the comments that follow in Section II of the commenter's letter. The comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project. Individual responses to each of the comments that are summarized in this comment appear below (see Responses to Comments NRDC-21 through NRDC-39).

CEQA allows for lead agencies, at their discretion, to revise or delete mitigation measures after approval. (See, e.g., *Lincoln Place Tenants Assn. v. City of Los Angeles* (2005) 130 Cal.App.4th 1491, 1508.) To do so, "a governing body must state a legitimate reason for deleting an earlier adopted mitigation measure and must support that statement of reason with substantial evidence. If no legitimate reason for the deletion has been stated, or if the evidence does not support the governing body's finding, the land use plan, as modified by the deletion or deletions, is invalid and cannot be enforced." (*Napa Citizens for Honest Govt. v. Napa County Bd. of Supervisors* (2001) 91 Cal.App.4th 342, 359.) Section 2.5.2 of the Recirculated DSEIR explained in detail why the changes to the mitigation measures were necessary to make the mitigation measure feasible, effective and enforceable. Such substantial evidence would support a determination by LAHD that there is a legitimate reason and good cause to approve the Revised Project.

Response to Comment NRDC-21

The comment summarizes and interprets correspondence between LAHD and applicant regarding the feasibility of mitigation measures in the 2008 EIR/EIS. This is not a comment on the adequacy of the environmental analysis in the Recirculated DSEIR. The comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

Regarding the comment's argument that the "infeasibility arguments are a litigation artifact and not supported by the record," LAHD is not aware of what litigation is referenced in the letter. Section 1.2.4 of the Recirculated DSEIR explains the background of the mitigation measures and the feasibility issues raised by China Shipping during the lease negotiations with LAHD. During this time, China Shipping informed LAHD that it continued to have technical, operational, and practical problems with executing some requirements of the mitigation measures, preventing full implementation of these measures (LAHD, 2017). LAHD reviewed the feasibility information provided by China Shipping, as well as other available information, and

determined it would be beneficial to analyze whether the existing mitigation measures have feasibility or other technical, operational, and practical problems hindering full and proper implementation and to identify how the measures could be changed to address such issues. Section 2.5.2 of the Recirculated DSEIR explained in detail why changes to the mitigation measures were necessary to make the measures feasible, effective, and enforceable. Such substantial evidence would support a determination by LAHD that there is a legitimate reason and good cause to approve the Revised Project. CEQA allows for lead agencies, in their discretion, to revise or delete mitigation measures after approval on such grounds. (See, e.g., Lincoln Place Tenants Assn. v. City of Los Angeles (2005) 130 Cal.App.4th 1491, 1508.)

Response to Comment NRDC-22

The comment summarizes and interprets language in Section 1.8.2 of the Recirculated DSEIR regarding the decision-making process of the Los Angeles Board of Harbor Commissioners (Harbor Commission) and the Los Angeles City Council with respect to the Revised Project. The purpose of this section is to provide information to the public and decision makers on the implications if the Revised Project is not approved by the Board of Harbor Commissioners. The Recirculated DSEIR acknowledges that if the mitigation measures are determined to be infeasible, but are not revised, the environmental impacts identified in the 2008 EIR/EIS would not be addressed and certain project objectives would not be implemented. In such a scenario, LAHD nonetheless would still be obligated to ensure compliance with the existing mitigation measures, and, thus, would need to take some further action, outside the scope of this Recirculated DSEIR, to address the problematic situation. This information was intended to provide the decision-makers with an understanding of the implications of their discretionary actions on the Revised Project and the practical or procedural challenges associated with maintaining the status quo, not to suggest, as argued by the comment, that any of the mitigation measures proposed to be changed are, in fact, feasible.

Response to Comment NRDC-23

Please see Master Response 1: Feasible Mitigation – Guidance and Applicability for a discussion of what constitutes feasible mitigation, and Responses to Comments SCAQMD-13, CFASE-5, and CFASE-6 for discussions of compliance with AMP and of alternative at-berth emission control technologies. Please refer to Response to Comment SCAQMD-13 for a discussion of the feasibility of MM AQ-9.

The comment states that "[n]one of the reasons cited in the RDSEIR overcome the presumption that a 100% compliance rate with AMP is feasible" but does not provide evidence or data demonstrating why, in the face of the rationale in Section 2.5.2.1, the commenter presumes that a 100% compliance rate with AMP is feasible. The discussion of infeasibility in Section 2.5.2.1 is not speculative and was based upon factors that would affect the ability of a container terminal to achieve the goal of having 100% of vessel calls use shore power. Table 2-1 of the Recirculated DSEIR demonstrates that 100% AMP or AMP-equivalent compliance has not been achieved for any year between 2008 and 2017, or more recently in 2018 as described in Response to Comment CFASE-5.

The LAHD disagrees that MM AQ-9 as worded in the Recirculated DSEIR "goes backwards' relative to the 2008 wording. The intent of MM AQ-9 is precisely what the comment recommends: that "100% of ships at dock are mitigating at-berth emissions with either shore power *or* an alternative emissions control system" with limited

exceptions for specific circumstances. The measure's requirement of 95% compliance only applies to AMP; it does not say that at-berth emissions control need only attain 95% compliance. The measure specifically requires that if AMP cannot be used, alternative control measures must be employed as feasible in the circumstances and to the extent those measures (at present, AMECS and METS-1) are available. Accordingly, the Port expects at-berth emissions control to exceed 95% -- and possibly approach 100% -- of vessel calls because at least some of the vessels that cannot use AMP will be able to use those alternative control measures.

Note that, as stated by the Ports in a joint letter to CARB (POLB and POLA, 2019), an expectation of 100% at-berth emissions control is unrealistic given the currently limited availability of AMECS and METS-1 units, the constraints to deploying both additional shore-power infrastructure and an extensive alternative system, and the likelihood of emergencies and other unforeseen occurrences preventing the use of AMP and alternative systems in the future. Even the comment letter admits that limited exceptions for emergencies should be added if the 100% AMP requirement is retained. The Recirculated DSEIR did not assume 100% compliance in order not to overstate the benefits of MM AQ-9. The reasoning behind these assumptions and expectations is explained fully in Section 2.5.2.1 of the Recirculated DSEIR, Master Response 3: Port-Wide Emission Reduction Programs, and Response to Comment CFASE-5.

The comment claims that the modification to MM AQ-9 in the Recirculated DSEIR is contrary to other port projects because 1) the Middle Harbor at the Port of Long Beach has had a 100% AMP requirement since December 2014 and 2) starting in January 2018, the Port's Trapac terminal will also require 100% AMP compliance. Please note that no other port EIRs have required 100% AMP since those two EIRs were certified in 2009 and 2007, respectively. Since that time, the Port of Los Angeles has certified three container terminal EIRs (APL, YTI, and Everport), all of which contain a 95% AMP requirement. In addition, the MMRP for the Port of Los Angeles Master Plan Update Program EIR contains a 95% AMP requirement for future environmental documents that may tier from the Program EIR. The 95% AMP requirement was established as a feasible and attainable compliance rate for container terminals at the Port. Note that Trapac's 100% AMP requirement, effective as of January 1, 2018, applies to ship hours at berth, not to the number of vessel visits. It is based on the tenant's specific business plan with Mitsui O.S.K. Lines Ltd (MOL), which is TraPac's parent company: MOL had committed to retrofitting its OGVs dedicated to the Los Angeles service with AMP technology (see LAHD, 2007, p. 53).

The commenter claims that the statement "the Port does not have the authority to impose any specific emissions reduction technology on OGVs as they are internationally flagged vessels subject only to IMO regulations" (page 3.1-54 of the Recirculated DSEIR) is inaccurate and contrary to the Port's authority as a landlord to impose lease conditions on its tenants. The LAHD disagrees and believes that the statement in the Recirculated DSEIR is not inaccurate and that it is supported in the 2017 CAAP. The Clean Ship Program as envisioned in the 2017 CAAP (page 67) recognizes that the Ports do not own or operate vessels and thus have few tools to compel the deployment of the cleanest available vessels or impose specific engine requirements. As such, the program will encourage and help accelerate the transition to a cleaner fleet through a future tariff that would charge rates to operators. This approach would be port-wide and would not be the same as imposing a vessel engine requirement through a tenant's lease. See also Response to Comment NRDC-41.

The LAHD disagrees with the commenter's suggestion that failure to implement and enforce 2008 MM AQ-9 in a timely manner itself rendered that measure infeasible under CEQA (citing CEQA Guidelines § 15091), and the commenter supplies no evidence to support that suggestion. The LAHD encourages all tenants to strive for 100% utilization of shore power but recognizes that real-world conditions occasionally prevent achievement of that goal, as described in the discussion of MM AQ-9 in Section 2.5.2.1 of the Recirculated DSEIR. Please see also Master Response 3: Port-Wide Emission Reduction Programs and Response to Comment CFASE-5 for more detail on AMP and other emission control technologies.

Response to Comment NRDC-24

Please see Response to Comment SCAQMD-14 for more detail on VSRP compliance. The comment cites instances in which selected shipping lines achieved 100% compliance with the VSRP during some of the past few years, but none in which all the vessels calling at a single container terminal achieved 100% compliance in both the 20 nm and 40 nm zones during every year the VSRP has been in effect. That is because, as the Port's data on its terminals from 2008 to 2018 show (see Response to Comment SCAQMD-14 for links to the data), there are no such instances. That latter level of performance – 100% compliance throughout the entire 40-mile approach by every vessel in every year -- is what MM AQ-10 as originally worded required (and what the Middle Harbor's measure requires). As the high compliance rates in the VSRP data show, individual shipping lines are clearly making good faith efforts to achieve 100% compliance, but just as clearly are not able to do so consistently at a single terminal. CEQA does not require that mitigation measures require compliance standards that have proven, based on substantial evidence, to be impossible to attain.

The Recirculated DSEIR (Section 2.5.2.1) discusses the reasons why requiring 95% is appropriate, and further points out that the effects on public health and air quality of a non-compliance rate of 5% are negligible. A compliance requirement of 95% is consistent with both POLA practice and the constraints to higher compliance rates discussed in the 2017 CAAP (Section 1.4) and the Recirculated DSEIR (Section 2.5.2.1). Please note that the Middle Harbor terminal's requirement of 100% compliance is a recent development: it is too early to conclude that it represents a feasible measure.

Response to Comment NRDC-25

Revised Project MM AQ-10 as worded in the Recirculated DSEIR requires that at least 95% of vessels calling at Berths 97-101 either comply with the expanded VSRP of 12 knots between 40 nm from Port Fermin and the Precautionary Area or comply with an alternative compliance plan approved by the LAHD for a specific vessel and type, and further requires that the LAHD would have to analyze any proposed alternative compliance plan to ensure that it meets the requirement to "achieve emissions reductions comparable to or greater than those achievable by compliance with the VSRP" (Recirculated DSEIR, p. 3.1-81).

The LAHD thanks the commenter for pointing out that an alternative compliance plan, to the extent that it would allow increased vessel speeds, could potentially have unintended consequences such as increased whale mortality from vessel strikes. In light of factual uncertainty on this point, the LAHD has determined to modify Revised Project MM AQ-10 to eliminate the option of compliance via an alternative compliance plan, to avoid the potential for significant adverse impacts of mitigation. Accordingly, MM AQ-10 in the

Revised Project has been revised to eliminate the provision for an alternative compliance plan, and now reads:

Starting on the effective date of a new lease amendment between the Tenant and the LAHD and annually thereafter, at least 95 percent of vessels calling at Berths 97-109 shall comply with the expanded VSRP of 12 knots between 40 nm from Point Fermin and the Precautionary Area.

The modification to Revised Project MM AQ-10 identified above does not raise the potential for an increase to the impacts analyzed in the Recirculated DSEIR, which assumed that 95% of vessels would either comply with the expanded VSRP or follow an approved alternative compliance plan that would achieve comparable or greater emissions reductions. Since the mitigation measure, as modified, will still require 95% compliance, there is no change to the emissions reductions assumed for this measure.

Response to Comment NRDC-26

Please see Master Response 1: Feasible Mitigation – Guidance and Applicability, Master Response 2: Zero- and Near-Zero-Emission Technologies, and Master Response 3: Port-Wide Emission Reduction Programs. Revised Project components related to cargo-handling equipment (MM AQ-15 and MM AQ-17) are directed at ensuring a timely conversion to the cleanest currently available engines. (Note that 2008 MM AQ-16 is combined with MM AQ-17 under the Revised Project because there is no actual distinction between railyard equipment and terminal equipment within WBCT as a whole.)

In addition, MM AQ-17 also requires the CS Terminal to transition to all-electric RTGs in those areas of the terminal that can support them. These measures do not preclude the ultimate conversion of terminal equipment to zero emission technologies, as envisioned by the 2017 CAAP, CARB, and the Mayor; in fact, LM AQ-1 and LM AQ-3 specifically allow for the CS Terminal to make that conversion. However, given the constraints described in the master responses and in Response to Comment NRDC-27, setting a date certain for conversion to zero emissions is not possible, although please note that LM AQ-3 specifically sets forth 2030 as the target date for achieving 100% zero-emissions cargo-handling equipment at the CS Terminal, consistent with the goals of the 2017 CAAP, CARB's 2017 initiative, and the declaration of intent by the mayors of Los Angeles and Long Beach.

The suggestion that the Revised Project include a project plan to install electric infrastructure to support zero emission equipment would expand the project beyond the scope of this SEIR, which is to consider feasible modifications to previously approved 2008 mitigation measures. Nevertheless, LM AQ-3 under the Revised Project does include zero-emission technology demonstration projects, which may set the groundwork for a future proposed project.

Response to Comment NRDC-27

The comment suggests that because zero-emission equipment is operating at the Trapac and Middle Harbor terminals it can readily be employed at the CS Terminal. It is important to note, however, that Trapac and Middle Harbor are the only terminals in the two San Pedro Bay ports that employ substantial quantities of zero-emissions equipment and that they underwent massive physical reconfigurations to accommodate that equipment, which is highly automated and relies on substantial electrical infrastructure. Furthermore, the basis of the comment's statements that "replacing diesel fueled cargo

handling equipment with high density automated electrified equipment can result in significant efficiency gains" and "zero emission cargo handling equipment is not only technologically feasible, it also increases efficiencies and profits" is unclear. The comment does not cite productivity or financial data from either terminal, and without such data the claim is unsubstantiated. The comment references a Journal of Commerce article (NRDC comment letter p. 22 footnote 44), implying that the article shows that converting to electrified equipment leads to cost savings, which, in the comment's words, "allows terminals to handle increased cargo volumes". The LAHD believes that statement misrepresents the article, which actually was silent on the subject of productivity and which pointed out that any cost savings would be the result of replacing "dozens of human-operated pieces of equipment with autonomous vehicles"; no mention was made of cost savings due to increased productivity.

Employing those types of equipment at the CS Terminal as a mitigation measure would require a substantial redevelopment of the terminal, with an estimated construction cost of $396 million, to reconfigure the container yard and to install electrical infrastructure and facilities for automated operations (see Master Response 2: Zero- and Near-Zero-Emission Technologies). New equipment purchases and business disruption during the 3-to-five-year construction period would add many millions of dollars more to that cost.

Response to Comment NRDC-28

The comment states that the Port "has failed to explain why "it has delayed installing…electric RTGs in the surcharge area" with the result that the measure was not accomplished by 1 January 2009. The Recirculated DSEIR explained (Section 1.2.4.1) that the LAHD was not able to implement this part of the requirement because the timing of the measure was dependent on a lease approval. However, China Shipping did not agree to an amended lease to incorporate the provisions of the 2008 EIS/EIR, citing a variety of reasons involving costs, operational constraints, and stranded assets. Since the lease approval did not occur, the LAHD had no means of implementing the provisions of MM AQ-17. Accordingly, the Port has had no role in deciding what equipment WBCT chose to purchase and install, including RTGs that did not comply with the requirements of MM AQ-17. The Recirculated DSEIR referenced the correspondence between China Shipping and the LAHD on that issue ("LAHD 2017a"), and copies of that correspondence were provided to NRDC.

The comment is correct in pointing out that electric-powered RTGs are feasible and are commercially available; that is the reason for their inclusion in MM AQ-17 of the Recirculated DSEIR. Since the SEIR process began in 2014, mitigation measures have been under review to determine feasibility. However, because the CEQA process takes time and Board action is required on the SEIR, it is not appropriate to characterize the LAHD as delaying implementation of mitigation that is still subject to approval, such as installing four electric RTGs in the surcharge area or abandoning plans that were being studied in 2014 when the SEIR process began.

However, the comment's assertion that all of the existing RTGs could readily be replaced by electric units is not correct. Contrary to the comment's claim, the Recirculated DSEIR presents a detailed discussion of the constraints to installing electric-powered RTGs throughout the terminal (Section 2.5.2.1, p. 2-19). Briefly, most of the CS Terminal is characterized by short container stacking areas, which makes it necessary for the RTGs to move between stacks, rather than each RTG simply working one long stack. Electric RTGs are tied to their power trenches, so that moving from stack to stack is operationally

cumbersome and inefficient. These constraints are the basis for why requiring all electric RTGs, as originally proposed in MM AQ-17 for the 2008 EIR/EIS, is infeasible.

The timing of the terminal design and configuration prior to and during the time of the 2008 EIS/EIR has also played a significant role in the selection of equipment that can feasibly operate at the terminal. As discussed in the 2008 EIS/EIR on page 1-22, the ASJ allowed the Port to complete construction and commence operation of Phase I of the China Shipping Project while the EIS/EIR was under preparation. Phase I construction was completed in 2003, and operations officially began on June 21, 2004 on approximately 72 acres of land encompassing backlands and the wharf at Berth 100. Out of roughly 142 acres total, 72 acres or 50% of the total terminal acreage had already been developed by 2004. The 2008 EIS/EIR (pages 2-1 and 2-14) estimated Phases II and III completion dates as 2010-2011 and 2012, respectively.

During design of the China Shipping Project while the EIS/EIR was underway, the Phase II portion included backland development at the surcharge area and the wharf at Berth 102 encompassing approximately 45 acres. This area was designed with basic infrastructure to support electrical vaults and switch gear because, although electric RTGs had been proposed as mitigation, the specific equipment requirements were unknown at the time the EIR was certified in 2008 and while terminal design was underway. The final Phase III construction was completed in 2013, as explained on page 1-36 of the Recirculated DSEIR, and this southern area includes land along the Vincent Thomas Bridge and Front Street that is approximately 25 acres in size. Figure 2-5 of the 2008 EIS/EIR provides a detailed illustration of the specific terminal areas that were built out in phases. All of these factors taken together serve as the basis for why requiring all electric RTGs at the terminal is infeasible and also answer the commenter's questions concerning why newer diesel cranes and hybrid cranes were purchased: it was because the terminal not only did not have the necessary electrical infrastructure but also was built out in a manner that made it impossible to allow for a complete redesign while the 2008 EIS/EIR was in process.

Furthermore, the comment's assumption that because the large, new Long Beach Container Terminal can accommodate electric units, the much smaller and older CS Terminal can as well, is unrealistic. The former was massively redeveloped specifically to accommodate automated, electric-powered cargo-handling equipment, including rail-mounted gantry cranes rather than RTGs, whereas the latter was constructed ten years earlier, before the advent of such equipment, and is not configured to accommodate electric-powered RTGs or RMGs in most of the container yard, as explained in detail above.

As revised in the SEIR, MM AQ-17 requires that electric RTGs be installed in the one area of the terminal that has longer stacks (the "surcharge area") and that hybrid units (e.g., EcoCranes^{TM}), replace the existing RTGs in the remainder of the terminal. Hybrid units are much cleaner than standard diesel units in terms of emissions, and furthermore are the cleanest feasible for this application, and CS indicated in the referenced correspondence that WBCT had purchased five such units (LAHD 2017, letter of March 25, 2015) to work in the non-electrified portion of the container yard.

Response to Comment NRDC-29

Please see Master Response 2: Zero and Near-Zero--Emission Technologies for a discussion of the current feasibility of zero emission yard tractors at the CS Terminal. Please note that the Recirculated DSEIR clearly acknowledges the 2017 CAAP's goal of

converting cargo-handling equipment to zero- or near-zero-emissions by 2030, consistent with CARB's March, 2017 initiative (Section 2.5.2.1, p. 21). MM AQ-15 does not conflict with that goal, since it specifies that replacement yard tractors shall be units that "meet **or are lower than** a NO_X emission rate of 0.02 g/bhp-hr and Tier 4 final off-road emission rates for other criteria pollutants" (emphasis added). Clearly, zero- or near-zero-emission units would meet that requirement. The measure largely addresses the near term and is aimed at accelerating the phase-out of older units.

The comment assumes the project did not meet the alternative fuel requirement for yard tractors until four years after the ASJ deadline in 2004 because the earliest data shown in the Recirculated DSEIR (Table 2-1) is for 2008. Those data are from annual emissions inventories starting with the SEIR baseline year of 2008. The table has been revised to clarify that since 2004, the yard tractors met the ASJ alternative fuel requirement, as reported on page 2-19 of the Recirculated DSEIR and in quarterly reports issued by the LAHD to appellants of the ASJ, including the NRDC.

As to the one-year electric yard tractor pilot project not being implemented and removed from MM AQ-17 without a reason or explanation, the LAHD was not able to implement this part of the requirement because, as stated in the measure, its timing was within one year of lease approval and a lease amendment approval did not occur (see Section 1.2.4.1 of the Recirculated DSEIR.

In addition, the original MM AQ-17's requirement for an electric yard tractor demonstration has been replaced by a more comprehensive requirement in LM AQ-3 that the CS Terminal conduct a demonstration program with at least ten units of zero-emission cargo handling equipment. As pointed out in the master response, demonstration projects are advanced technology tests that have no guarantee of success. Accordingly, mandating those technologies in a mitigation measure could be considered a violation of CEQA, as it could lead to the inability of the Port and its tenant to comply with a measure that subsequently proved to be infeasible or ineffective at reducing an identified impact. As such, it is applied as a lease measure rather than a CEQA mitigation measure as appropriate. Clarifying language has been added to Section 2.5.2.1 (see Section 3.2.2 of the Final SEIR) to explain how the pilot project is replaced by LM AQ-3.

Consistent with WBCT's willingness to participate in a pilot project as pointed out in the comment, the LAHD has been proactively seeking grant funding opportunities for testing and demonstration at WBCT. On April 6, 2018, the California Energy Commission (CEC) notified the LAHD of a grant award by the for "Advanced Freight Vehicle Infrastructure Deployment." Under that program, the LAHD in coordination with WBCT proposes to test 10 zero emission yard tractors at the CS Terminal with wireless "WAVE" inductive charging systems. The grant acceptance requires an agreement with the CEC, which is currently under development and is subject to approval by the Los Angeles Board of Harbor Commissioners.

The LAHD has provided substantial evidence justifying why the original yard tractor engine requirement in MM AQ-15 was not met. As discussed in Section 1.2.4.2 of the Recirculated DSEIR, China Shipping informed LAHD that implementing MM AQ-15 was problematic because it would require replacing, almost immediately, all of the yard tractors originally purchased to meet the first phase of the mitigation measure with remaining useful life, with newer units to meet the second phase of the mitigation measure. This would result in stranded assets of equipment that retain operational

usefulness. The details of this problematic situation are set forth in the letters the LAHD received from China Shipping that are cited by the commenter. As initially stated in the February 25, 2015 letter and confirmed in the March 25, 2015 letter, China Shipping and WBCT provided a detailed timeline of when the alternative-fueled yard tractors were purchased to meet the first engine requirement of MM AQ-15. The delivery dates for purchases were in 2004 for 54 units, 46 units in 2007, and then 56 units through July 21, 2008. It is important to note that all 155 yard tractors purchased from 2004 through July 2008 were the cleanest available at that time in order to comply with the ASJ and occurred while the 2008 EIR was still under CEQA review. The ASJ requirement essentially became the first phase of MM AQ-15. The second phase of the mitigation measure, requiring Tier 4 final engines by January 1, 2015, was approved when the EIR was certified on December 8, 2008. The last purchase of 23 yard tractors followed in 2011, and those units met the Tier 4 requirement. The sequence of these events reveals significant issues with the timing and feasibility of the second phase of MM AQ-15 as follows:

1. The oldest units purchased in 2004 still had remaining useful life through 2018, based on WBCT's average use and life expectancy; that means they would still have three years of useful life remaining after the Tier 4 requirement of MM AQ-15 would be in effect. In order to meet the phasing schedule, the Tier 4 equipment would have had to be ordered in advance to be delivered and in use by January 1, 2015. This would add at least another four years of remaining useful life to the oldest units since Tier 4 equipment was not available to purchase until 2011.
2. The above scenario further exacerbates the situation with respect to the operational useful life of equipment purchased in 2007, 2008, and 2011 that would have to be taken out of service.
3. Based on the number of stranded assets that had remaining operational useful life, WBCT would have been required to make monthly payments for the equipment purchases between 2015 and 2020, which is up to five years after the Tier 4 requirement would have been in effect.
4. The estimated cost to replace all 155 yard tractors at once is approximately $17,000,000. As stated in the letter, this expense is not economically or competitively feasible for WBCT or China Shipping.

Based on the record, therefore, the LAHD has provided substantial evidence of the mitigation measure's infeasibility.

With respect to the yard tractor replacement schedule for the Revised Project, changes to MM AQ-15 require replacement of model years 2007 or older no later than one year after the effective date of a new lease amendment. This immediate turnover is tied to the useful life of the yard tractors that are in use at the CS Terminal and could, as the comment suggests, be due as early as 2020. The comment ignores the first phase in and only refers to the second phase of the Revised Project's requirement in MM AQ-15, which calls for replacing model years 2011 or older no later than five years after the effective date of a new lease amendment, which is also tied to the useful life expectancy of the equipment.

The LAHD does not dispute the comment's list of demonstration projects at container terminals in the two ports but points out that all of the projects in that list are currently in progress (see also the review of yard tractor demonstration projects in Master Response 2: Zero- and Near-Zero-Emission Technologies). None has yet to demonstrate that

electric yard tractors can, in the long term, meet the duty cycle requirements of the terminals, specifically the ability to work two shifts without recharging (LAHD, 2018; Tetra Tech/GNA, 2019b). Please see Master Response 2: Zero- and Near-Zero-Emission Technologies, for details on the status of zero-emission technology demonstration projects in the port environment. Accordingly, the LAHD disagrees with the comment's assertions regarding the feasibility, availability, and cost effectiveness of electric yard tractors. As described in detail in Master Response 2: Zero- and Near-Zero-Emission Technologies, electric yard tractors are still in the demonstration phase and face substantial challenges related to duty-cycle requirements, the need for and cost of supporting infrastructure, life-cycle costs, and availability from manufacturers.

The Port expects those challenges to be overcome in the future, as described in the 2017 CAAP. Until then, however, the comment's assertion that "Various terminals at both ports are using electric yard tractors in regular operations" with a footnote reference to the 2017 CAAP misrepresents both the situation in the terminals and the CAAP document. In fact, electric yard tractors are not in regular service at any terminal: in every case, including the Long Beach Container Terminal case cited in the comment, they are in demonstration to determine what further development is necessary to make them practicable and economical for large-scale deployment. The 2017 CAAP actually says (p. 51), "Zero-emissions technology also seems promising for traditionally operated yard tractors and top handlers. Both Ports have begun demonstrating electric yard tractors at multiple terminals with nearly 30 such tractors expected to be in testing or full use by the end of 2019." Demonstrations, which constitute all of the examples cited in the comment, are not "regular operations." Nowhere does the 2017 CAAP state or imply that zero-emissions yard tractors are in regular operation at port terminals. As stated several times in these responses, the LAHD believes that it would be irresponsible to require unproven technology in a mitigation measure, given the danger that the measure would be unenforceable.

The LAHD also disagrees with the comment's assertion that the Port must demonstrate that it is deploying Automated Guided Vehicles (AGVs). In the Port complex such vehicles are in use at the Long Beach Container Terminal, but that terminal underwent massive reconstruction to install that technology. AGV technology is totally infeasible for the CS Terminal because the terminal does not have the infrastructure or container yard layout to support AGVs. With respect to hybrid-electric engines, the Revised Project includes as part of MM AQ-17 a requirement for the CS Terminal to convert its RTGs to hybrid-electric units (except for four units that will be all electric). As described in the 2017 CAAP (p. 50) and in Tetra Tech/GNA (2019b), hybrid-electric technology has not been demonstrated to be feasible for other CHE such as yard tractors, and it is unclear whether hybrids can meet the near-zero emissions thresholds.

Response to Comment NRDC-30

Please see Master Response 2: Zero and Near-Zero--Emission Technologies for a discussion of the current feasibility of zero emission forklifts at the CS Terminal. The comment's statement that MM AQ-17 should be "strengthened" to require transition to all-zero-emission units by 2030 ignores the fact that that is what the measure as currently worded does. The Recirculated DSEIR clearly acknowledges the 2017 CAAP's goal of converting cargo-handling equipment to zero- or near-zero-emissions by 2030, consistent with CARB's March, 2017 initiative (Section 2.5.2.1, p. 21). MM AQ-17 does not conflict with that goal, since it specifies that replacements for heavy-duty forklifts shall be units that "meet **or are lower than** Tier 4 final off-road" standards (emphasis added)

and that 5-ton forklifts shall be transitioned to electric units within two years of lease amendment. Clearly, zero- or near-zero-emission units would meet that requirement. The measure largely addresses the near term and is aimed at accelerating the phase-out of older units.

The comment is correct in noting that MM AQ-17 does not require zero-emission high-tonnage forklifts. As described in Master Response 2: Zero- and Near-Emission Technologies, the Port's recent study (Tetra Tech/GNA 2019b) verifies that there are no such units currently available; all of the electric forklifts in commercial service are lower-tonnage models. The comment references a demonstration project at the Pasha terminal, but as previously stated, demonstrations are not regular service, and units in such projects cannot be assumed, for CEQA mitigation, to constitute feasible technology. At this time, low-emission units are the only feasible alternative to conventional diesel high-tonnage forklifts; accordingly, the comment is correct in pointing out that MM AQ-17 allows the CS Terminal to continue to invest in diesel technology. The LAHD expects that as the new low-emission units purchased under MM AQ-17 reach the end of their useful service life, the provisions of LM AQ-2, LM AQ-3, and the CAAP will result in their replacement with the then-current technology, which is expected to be zero emission.

With respect to the number of forklifts, the Recirculated DSEIR (Section 2.4.3) is correct in identifying 17 forklifts (9 LPG-fueled and 8 diesel) at the CS Terminal in the 2008 baseline; the comment's tally of 15 units could not be replicated in a review of the Recirculated DSEIR. Furthermore, the Recirculated DSEIR states in Section 2.5.2.1 (p. 2-19) that by 2004, all of the forklifts met the ASJ requirements for emulsified diesel and DOCs. The engine requirements in the original MM AQ-17 that followed in 2009 and 2012 were not met because, as stated in Section 1.2.4.2 of the Recirculated DSEIR, China Shipping informed the Port that replacing cargo-handling equipment, including forklifts, to meet the Tier 4 non-road standard would be prohibitively expensive and require the retirement of units with useful life remaining. As a result, the original MM AQ-17 requirement that applies to forklifts was not met, and, as the comment points out, the CAAP measure CHE-1 in place in 2010 was also not met.

Response to Comment NRDC-31

Please see Master Response 2: Zero- and Near-Zero-Emission Technologies for a discussion of the current feasibility of zero-emission top-picks at the CS Terminal. Note that the Recirculated DSEIR clearly acknowledges the 2017 CAAP's goal of converting cargo-handling equipment to zero- or near-zero-emissions by 2030, consistent with CARB's March, 2017 initiative (Section 2.5.2.1, p. 21). MM AQ-17 does not conflict with that goal, since it specifies that replacement toppicks shall be units that "meet **or are lower than** Tier 4 final off-road" standards (emphasis added). Clearly, zero- or near-zero-emission units would meet that requirement. The measure largely addresses the near term and is aimed at accelerating the phase-out of older units. LM AQ-1 and LM AQ-3 provide the mechanism whereby zero-emission units would be incorporated into the CS Terminal as they become feasible technology.

The comment asserts that the Port failed to explain why the Tier 1 toppicks were not replaced in 2016 based on letters received during the SEIR process. Since the SEIR process began in 2014, mitigation measures have been under review to determine feasibility, and letters such as those pointed out by the commenter serve as evidence for revising MM AQ-17. However, because the CEQA process takes time and Board action is required on the SEIR, the LAHD is not able to implement this mitigation prior to

Board action or to enforce such a requirement without a lease amendment approval. With respect to electric toppicks, the comment suggests that existing toppicks should be replaced with electric units, but correctly characterizes the current status of those units as demonstration projects; Tetra Tech/GNA (2019b) confirms that zero-emission toppicks have not yet demonstrated commercial and technical feasibility. As pointed out in the master response, demonstration projects are advanced technology tests that have no guarantee of success. Accordingly, mandating those technologies in a mitigation measure could be considered as a violation of CEQA, as it could lead to the inability of the Port and its tenant to comply with a measure that subsequently proved to be infeasible.

The comment cites a letter from China Shipping to the Port in 2015 in which China Shipping indicated that eight top handlers with Tier 1 engines could be replaced in the near future. Please note that in that letter China Shipping did not specify the emissions level of the replacement units and given the lack of a lease containing MM AQ-17, the Port had no means of ensuring that replacement units would be the cleanest available. Considering that fact and the infeasibility of zero- and near-zero-emissions units at that time (and even now), there is no justification for assuming that replacement units would even meet, let alone exceed, the requirements of MM AQ-17.

Response to Comment NRDC-32

Please see Master Response 2: Zero Emission Technologies for a discussion of the current feasibility of zero emission sweepers and shuttle buses at the CS Terminal. Note that the Recirculated DSEIR clearly acknowledges the 2017 CAAP's goal of converting cargo-handling equipment to zero- or near-zero-emissions by 2030, consistent with CARB's March, 2017 initiative (Section 2.5.2.1, p. 21). MM AQ-17's requirement for shuttle buses would clearly result in an all-electric fleet before 2030. With respect to sweepers, the measure largely addresses the near term and is aimed at accelerating the phase-out of the two old units. One unit is model year 2005, the other 1995, and neither unit meets USEPA Tier 4 engine standards.

The comment points out that the Recirculated DSEIR does not explain which of the original mitigation measures it is relaxing with respect to sweepers and shuttle buses, nor does it assess compliance rates. As shown in Table 2-1 of the Recirculated DSEIR, MM AQ-17 in the 2008 EIS/EIR did not specifically call out requirements for shuttle buses and sweepers because the mitigation was developed for cargo handling equipment operating on the terminal in order to be consistent with CAAP measure CHE-1 that was in place at that time (see page 3.2-71 of the 2008 Draft EIS/EIR). Rather than relaxing the measure, as the commenter claims, the LAHD has actually strengthened MM AQ-17 by including this equipment and requiring the cleanest available sweeper units and zero-emission shuttle buses. The requirement for low-emission sweepers recognizes the fact that, as described in Response to Comment CFASE-12, there are no zero-emission heavy-duty sweepers available; the electric model available is a light-duty parking lot sweeper that could not fulfill the CS Terminal's requirements. Furthermore, there is no compliance data on this equipment because, as mentioned above, MM AQ-17 did not specify any requirements and no such equipment was analyzed or considered in the air quality analysis for the project in the 2008 EIS/EIR.

Response to Comment NRDC-33

CEQA requires that mitigation measures must feasibly reduce or avoid significant impacts. All currently feasible mitigation measures for significant impacts in the areas of

air quality, greenhouse gas emissions, and transportation are identified as "mitigation measures" ("MMs") in the Recirculated DSEIR. Lease Measures LM AQ-1 and LM AQ-3 are not identified in the Recirculated DSEIR as mitigation measures, nor are they intended as substitutes for feasible mitigation measures under CEQA. As such, these lease measures are separate from CEQA, and are not subject to the requirements that CEQA places on mitigation measures, including requirements of specificity. Rather, they are proposed as supplements to CEQA mitigation measures, as a means of introducing additional, currently infeasible zero- and low-emission impact-reduction technology, when and if it becomes feasible in the future. The nature and efficacy of currently unavailable impact-reducing technology that may later be determined feasible and introduced under these lease measures is not yet known. Therefore, the Recirculated DSEIR does not quantify or otherwise characterize the amount or degree of impact-reduction that may result from theses lease measures.

Response to Comment NRDC-34

With regard to the feasibility of requiring zero-emission trucks to service the CS Terminal, please see Response to Comment SCAQMD-11. In addition, the comment speculates on potential uses of electric drayage trucks in short-haul port service (e.g., to move containers between terminals and peel-off yards or near-dock railyards). As with a blanket requirement, those specific uses cannot be imposed on a terminal-specific basis because the terminal has no control over the trucks that move cargo through its gates. The Port is exploring the feasibility of devoting a zero-emission drayage operation to short hauls within and near the harbor but that is a port-wide, not a terminal-specific, solution that has not yet been determined to be practicable.

The comment mentions several programs in which electric trucks "are being developed and tested now in Los Angeles and Long Beach, supported by massive amounts of grant funding" and asserts, without evidence or data, that "longer drays will soon be possible with equipment from Volvo, BYD and others, and the Port should require China Shipping to commit to their use." However, the LAHD points out that a mitigation measure cannot be imposed on a mere expectation of feasibility and that this particular measure cannot be imposed on a single terminal for the reasons described in detail in the Recirculated DSEIR and the Drayage Truck Study.

The comment correctly points out that the Recirculated DSEIR assumed that the percentage of LNG trucks in the drayage fleet is "likely increasing in future years." In fact, as described in the most recent analysis of the drayage truck industry (Tetra Tech/GNA 2019a), the percentage has decreased in recent years from a high of approximately 8% in 2013 to approximately 3% in 2018 as trucking companies terminate leases and sell older LNG units in favor of new conventional diesel units meeting the CTP's requirements. Stronger engines in newer LNG-fueled units are likely to maintain LNG-fueled heavy-duty trucks in the drayage fleet, but the comment's assumption that their percentage of the fleet will increase above its historic high is speculation (as was the statement in the Recirculated DSEIR).

Response to Comment NRDC-35

The LAHD disagrees with the assertion that the LNG truck measure is and was feasible. Please see Response to Comment SCAQMD-11. MM AQ-20 was developed in the expectation that LNG trucks would be become widely available and economically feasible to operate (with subsidies from the ports and CARB) because pilot program results were encouraging. In short, MM AQ-20 imposed an unproven technology on a

single marine terminal. As explained in detail in the "Assessment of the Feasibility of Requiring Alternative-Technology Drayage Trucks at Individual Container Terminals" (referenced in the Recirculated DSEIR as LAHD 2017 and hereinafter the "Drayage Truck Study") and summarized in the Recirculated DSEIR's discussion of MM AQ-20 (p. 2-22 – 2-24), LNG trucks never became a large enough component of the drayage truck fleet to have enabled them to haul 100% of China Shipping's cargo. In addition, as the Drayage Truck Study describes, China Shipping did not, and does not, control which trucks haul cargo coming through the CS Terminal, and trying to do so, for example, by turning away non-LNG trucks at the gate as suggested in the comment, would result in a competitive disadvantage, possibly financially ruinous, as shippers turned to cheaper and less restrictive terminals.

The comment cites the case of the SCIG project, and although that project did contain a low-emission drayage truck requirement, the comment misrepresents the case. That project was fundamentally different from the China Shipping case in that BNSF (the SCIG facility's owner and operator) does contract for drayage and would therefore be able to control the drayage fleet servicing its facility. Furthermore, the requirement (MM AQ-8) was not for "LNG-equivalent trucks," as stated in the comment, but rather for trucks meeting "an emission reduction in diesel particulate matter emissions (DPM) of 95% by mass relative to the federal 2007 on-road heavy-duty diesel engine emission standard ("low-emission" trucks)" (LAHD, 2013c, p. 2-9). Finally, the measure did not require all trucks to meet the low-emission standard, but instead incorporated a phase-in schedule that gradually increased the proportion of low-emission trucks to a maximum of 90% in 2026 and beyond. Accordingly, MM AQ-8 of the SCIG project represented feasible mitigation whereas MM AQ-20 of the China Shipping project did not.

LNG-fueled drayage trucks were conceived at the time as the best possible approach to reducing drayage truck emissions, but they turned out not to be successful at achieving that goal. The NRDC itself specifically acknowledged the failure of the LNG truck effort: Mr. David Pettit of the NRDC was recently quoted as saying, *"It was a huge experiment with public money, well meaning, and it didn't work. This is public money going to private industry to clean up the air pollution that private industry is causing. A lot of money was essentially wasted on subsidizing LNG trucks that were not successful in operation."* (KPCC, 2017).

Instead, as the NRDC acknowledges in comment NRDC-37, the solution is a port-wide approach. The 2017 CAAP promulgates that approach in its outline of the proposed update to the Clean Truck Program (Section 1.1). The update will include measures mentioned in the comment (operational and financial incentives for clean trucks and financial penalties for non-zero-emission trucks) as well as other measures aimed at ensuring the operational and financial sustainability of zero-emissions trucks in the drayage industry. The 2017 CAAP addresses the numerous and complex issues involved in effecting a multi-billion-dollar change in a highly competitive industry with narrow profit margins and a fraught labor environment, and recognizes that the change will require a huge effort on the part of many stakeholders and will not happen overnight at a single marine terminal.

Response to Comment NRDC-36

Please see Master Response 2: Zero- and Near-Zero-Emission Technologies for a discussion of the feasibility and current status of zero-emission drayage trucks and Response to Comment NRDC-34 regarding short-haul drayage. The LAHD does not

disagree with the comment's assertion that zero-emission drayage trucks are currently available for short-haul applications, although we note that all of the comment's examples, taken from a recent SCAQMD publication, are of demonstration and pilot projects or various efforts characterized as being in the future (e.g., "BYD will develop…"; "… trucks will be designed…"; "Kenworth will develop…"). Battery-electric trucks suitable for short hauls are likely to become generally available in the near future, as the 2017 CAAP acknowledges (Section 1.1 p. 47). When that occurs, the Ports, through the Clean Truck Program update outlined in considerable detail in the 2017 CAAP, will facilitate their introduction, including conducting a pilot deployment program that is already underway, providing financial incentives and near-terminal container handling facilities suited to short-haul drayage, and installing charging infrastructure.

Note, however, that the 2017 CAAP envisions a port-wide effort on the part of both ports. Imposing zero-emission drayage, short-haul or otherwise, on a single terminal is infeasible because, as explained in the Drayage Truck Study and acknowledged by comment NRDC-37, individual terminals have little or no role in or influence over the drayage industry, which is managed by other parties. Changes in the port drayage industry must be effected on a regional basis in order to ensure a level playing field for all parties – terminals, trucking companies, cargo owners, shippers, and the various supporting entities. For that reason, the Revised Project does not include MM AQ-20, which attempted to impose a trucking measure on a marine terminal.

Response to Comment NRDC-37

The LAHD agrees that the solution to the feasibility of requiring 100% LNG trucks is port wide. Please see Responses to Comments NRDC-35 and NRDC-36. The Recirculated DSEIR does, in fact, acknowledge that both ports are on a path to achieve zero-emissions drayage trucks by 2035 through the 2017 CAAP (Recirculated DSEIR p. 2-24). The comment states that the Port did not analyze "that," presumably referring to the joint mayors' proclamation regarding a port-wide drayage solution. That proclamation was incorporated into the 2017 CAAP, which, as explained above, the Recirculated DSEIR acknowledged. It is unclear what additional analysis the commenter envisions, and without additional detail no further response is possible.

Response to Comment NRDC-38

The LAHD disagrees that the priority access system required in LM AQ-2 should be limited to zero-emission trucks. Such a restriction would have the disadvantage that it would not reap any rewards in terms of emissions for a number of years since, as described in the 2017 CAAP, zero-emission trucks are unlikely to be numerous in the drayage fleet before 2024, when they are expected to comprise no more than 14% of the fleet (2017 CAAP p. 42). It is unlikely that priority access systems at marine terminals would significantly affect the penetration of zero-emission vehicles into the drayage fleet; the more likely drivers of change will be financial incentives to purchase those vehicles, the number of vehicles available for purchase, the development of charging and maintenance infrastructure, and the observed operating costs. On the other hand, near-zero-emissions trucks are expected to be widely available (2017 CAAP p. 42), and the presence of priority access systems at marine terminals would add an incentive to those already envisioned in the Clean Truck Program update described in the 2017 CAAP. If those trucks could not take advantage of a priority access system, then the emissions

benefits of reduced in-terminal idling times would not be realized and an incentive, however small, for their incorporation into the drayage fleet would be lost.

Response to Comment NRDC-39

The LAHD disagrees that LM AQ-23 should be retained simply because "the Port has never claimed it is infeasible." The LAHD stands by its conclusions in Section 1.3 of the Recirculated DSEIR that the Revised Project would eliminate some measures that have proved to be unnecessary and that periodic throughput tracking reviews are unnecessary because: 1) LM AQ-22, which requires periodic review of new technology, is still in effect; and 2) the Revised Project includes LM AQ-1 and LM AQ-3. These initiatives will ensure that new technologies are incorporated into terminal operations as they become available. Since these technologies would represent the best available emissions reduction measures, they would be identical to the mitigation measures that would be identified if throughput tracking and subsequent air quality analysis were to identify additional impacts. Accordingly, LM AQ-23 would not result in any mitigation measures that would not be implemented through LM AQ-1, LM AQ-3, and LM AQ-22.

Response to Comment NRDC-40

In compliance with CEQA and as addressed in detail in Section 2.5.2.1 of the Recirculated DSEIR, the Revised Project comprises all feasible replacement mitigation measures for significant impacts of the China Shipping Container Terminal Project. It replaces certain 2008 EIS/EIR mitigation measures that LAHD has determined are infeasible or no longer necessary and determines based on substantial evidence that no further or additional feasible mitigation is available for those impacts, or for the impacts of the Revised Project. CEQA does not require that a supplemental EIR for proposed changes to a previously approved project assess mitigation to reduce or avoid impacts of the project that occurred prior to approval of the proposed change. Nevertheless, for informational purposes only, the Recirculated DSEIR does disclose emissions that occurred between 2008 and the present due to incomplete implementation of mitigation from the 2008 EIS/EIR (Table 3.1-11.) See also Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures.

Response to Comment NRDC-41

The 2008 EIS/EIR's mitigation measure MM AQ-13 Reroute Cleaner Ships remains applicable as approved based on the 2008 EIS/EIR and is not part of the Revised Project in this SEIR. Nevertheless, the commenter suggests that because the Port and the CS Terminal are in compliance with this measure, the SEIR should consider a similar measure that encourages the rerouting of Tier 2 and Tier 3 vessels to the CS Terminal. The commenter suggests that in its consideration the Port should take into account the 2017 CAAP's projections of the future vessel fleet to establish percentages and deadlines for the measure.

The commenter is correct in pointing out that ships have been getting cleaner and that MM AQ-13 has been complied with. Emissions inventory data showed that in 2013 all vessels operated by China Shipping that called at the CS Terminal were Tier 1 and that in 2014 more than half of the vessels were Tier 2. Data from 2015 to 2018 confirm that all of the vessels calling at the CS Terminal have been a mix of Tier 1 and Tier 2 vessels meeting the requirements of MM AQ-13. This trend towards cleaner vessels is primarily due to the timing of the IMO Marine Engine Regulations coming into effect and the natural phase-out of older smaller ships.

Nevertheless, the LAHD disagrees with the commenter's suggestion for a number of reasons. First, the projections in the 2017 CAAP are based on a number of assumptions regarding the complex of economic, business, and technical factors that will drive the composition of the world fleet (see 2017 CAAP Section 1.7). Given how far in the future those projections are, they must be regarded as speculative estimates, not as firm predictions of the numbers of Tier 2 and Tier 3 vessels in the fleet or the dates when given percentages of those tier levels will be in service. The 2017 CAAP points out that vessel owners are under no obligation to purchase Tier 3-equipped vessels in the foreseeable future, given the substantial backlog of uncompleted Tier 2 vessels available to them. This means that there is no certainty regarding deployment of Tier 3 vessels in service to San Pedro Bay, as indicated by the total absence of such vessels from Table 7 (Forecasted Vessel Arrivals to San Pedro Bay in 2025 by Engine Tier and Vessel Type) of the 2017 CAAP. As the 2017 CAAP states (p. 70) "it is impossible to predict what the shipping industry will look like in 2025." Accordingly, imposing a mitigation measure that mandates certain percentages of Tier 3 vessels by certain dates would be unrealistic and unjustified by any data.

Second, please note that MM AQ-13 is still in effect, and it already provides a framework for encouraging the cleanest vessels to call at the CS Terminal by specifying that "75 percent of all ship calls…meet IMO MARPOL Annex VI NOX emissions limits for Category 3 engines." There are three tiers of IMO emission limits for category 3 marine engines: Tier 1 became effective in 2000 (applies to vessel engines with keel laid dates of 2000 to 2010); Tier 2 became effective in 2011 (applies to vessel engines with keel laid dates of 2011 to 2015); and Tier 3 became effective in 2016 in Emission Control Areas. Accordingly, MM AQ-13 is still applicable because regulations are in place that address the future fleet; to the very limited extent either the CS Terminal or the Port can influence vessel scheduling, MM AQ-13 would guide those efforts.

Third, given how shipping alliances operate, sharing vessels and terminals, the issue of container vessel engine types is best approached on a bay-wide basis rather than a terminal-by-terminal basis. As alluded to above, the Ports do not own or operate the vessels and terminal operators do not control the deployment of specific vessels to their terminals. Accordingly, a mitigation measure targeting a particular terminal in a particular port has little power to affect the operator of a vessel fleet deployed worldwide. A more effective approach is for major ports – and even whole countries -- to exert pressure in the form of port incentives and taxes (as Norway has done to encourage LNG-fueled vessels). This is the approach proposed in the 2017 CAAP (p. 68): to "[i]mplement a variable rate on ships according to engine tier level to encourage calls by cleaner ships and to discourage older ships. A higher rate would be applied initially to Tier 0 ships, later adding Tier 1 ships, and would begin no earlier than 2025. Any collected funds would be used to provide incentives directed at reducing emissions from ships."

Finally, the commenter offers no suggestions for how, in the absence of firm data on the availability of Tier 3-engine-powered vessels, the feasibility assessment of a proposed mitigation measure would attempt to develop a phase-in schedule or percentages. Lacking such specifics, the LAHD concludes that the suggestion is infeasible and no further response is required.

Response to Comment NRDC-42

LAHD is committed to addressing the overall off-Port impacts created by Port operations on surrounding communities and their residents. The Harbor Community Benefit Foundation (HCBF) is a nonprofit organization that administers the Port Community Mitigation Trust Fund (PCMTF). The PCMTF was established in 2008 by a Memorandum of Understanding (MOU) to settle appeals of certification of the Berths 136–147 [TraPac] Container Terminal Project Final EIS/EIR. Exhibit B of the MOU established a list of specific Port expansion projects for which LAHD would contribute to the PCMTF if implementation of the project would occur within the coverage dates of the MOU. Any EIR not certified by May 2016 falls outside of the effective coverage date of the MOU and is not required under the MOU to make a contribution to the PCMTF. Although LAHD will not be contributing to the HCBF as a result of the Revised Project, it is important to note that LAHD contributes 10 percent of its operating income annually in local public infrastructure improvement projects. This amount of money equates to approximately $22-$25 million per year. In addition, LAHD annually contributes another approximately $20 million to public programs and public access projects.

With respect to funding mitigation projects outside the Harbor District, absent the TraPac MOU, please see Response to Comment CFASE-14. Please note that the Port already supports the Technology Advancement Program at an annual level of up to $1,500,000 (up to $3 million total from both Ports), which results in substantial off-Port benefits to the community in terms of emission reduction.

Response to Comment NRDC-43

The suggestion that the Port should require the CS Terminal to send at least 50% of its cargo via on-dock rail is inconsistent with the realities of goods movement and mischaracterizes a port-wide goal stated in the CAAP. Cargo destinations and means of transport are set by the beneficial cargo owners and the shippers. Neither the CS Terminal nor the Port have any control whatsoever over either of those factors. If less than 50% of a terminal's cargo is bound for inland destinations served by rail (so-called inland point intermodal, or IPI, cargo), then a lease measure requiring at least 50% on-dock would be impossible to comply with.

Approximately 22% of the CS Terminal's cargo is intermodal: in 2014 the terminal handled a total of 1,088,639 TEUs, but only 264,000 TEUs left the region on trains (208,000 on-dock, 56,000 at the ICTF and the downtown railyards); the remainder went to local destinations by truck. It is true that the 2017 CAAP envisions a distant future in which up to 50% of all cargo port-wide will leave the port complex by rail, but the actual goal is to be able to accommodate 35% of cargo on trains, and that goal has no schedule and is not specific to any individual terminal (2017 CAAP p. 73). Furthermore, those numbers will only occur if a greater percentage of the cargo coming through the ports is not local, but is instead IPI cargo.

Finally, please note that the Port cannot dictate cargo transportation modes on a terminal-by-terminal basis. The Port's role in increasing the use of on-dock (and near-dock) rail for intermodal cargo is restricted to ensuring that terminals have adequate access to in-terminal or nearby intermodal facilities, that the Port's rail network can handle the rail traffic, and that necessary intermodal facilities are permitted as appropriate.

Response to Comment NRDC-44

Please see Master Response 3: Port-Wide Emission Reduction Programs for a description of the measures related to tugboats and other harbor craft that have been and are being developed by the Port, tugboat companies, and local and state government. The comment's suggestion that harbor craft control measures should somehow be the responsibility of a single marine terminal to implement is inconsistent with the realities of maritime activities. Tugboats are contracted by shipping lines, not marine terminals, to assist vessels entering and leaving the Port. The CS Terminal does not and could not have any authority over which tugboats assist which container vessels.

The LAHD agrees, however, that tugboat emissions are an important source that needs to be addressed. Like drayage trucks, however, harbor craft emissions are a problem that requires a port-wide approach, as outlined in the 2017 CAAP, rather than a terminal-by-terminal approach. The CAAP measures that the comment summarizes will be applied to the entire suite of harbor craft, not just those that serve the CS Terminal, and will substantially reduce harbor craft emissions. Requiring implementation of those measures at a single marine terminal is not practical: the incentives and emission standards that the comment suggests be targeted on the CS Terminal are actually going to be applied port-wide; the port-wide approach will make any measures that specifically target the CS Terminal redundant and irrelevant.

Response to Comment NRDC-45

Please see Master Response 3: Port-Wide Emission Reduction Programs for a description of the measures related to railroad locomotives that have been and are being developed by the Port, railroad companies, and local and state government. The comment correctly points out that the harbor rail switching entity, Pacific Harbor Line (PHL) has made great progress in upgrading its fleet to the lowest feasible emissions. In fact, PHL's fleet is currently the cleanest in the country and is actively converting to Tier 4-engine-powered locomotives (2017 CAAP p. 74). The ports are seeking funding to support the development of the next generation of switch locomotives: near-zero and zero-emission units, and have committed through the 2017 CAAP to promote the development of Tier 5 engine standards for locomotives (2017 CAAP p. 30).

Given the fact that switching (and line-haul) locomotives are active throughout the port complex, the solution to locomotive emissions, like the solutions to drayage truck and harbor craft emissions, is port-wide, not terminal-specific. Previous Port environmental documents, including the 2008 EIS/EIR, have attempted a terminal-by-terminal approach to locomotive emissions, but substantive adoption of cleaner technologies and emission reductions has come through the implementation of the port-wide measures in the various iterations of the CAAP and, in the case of line-haul locomotives, by state and federal initiatives. As pointed out in the comment, the 2010 CAAP Update included rail measure RL-2 with a goal of Class I locomotives meeting Tier 3 standards by 2023. The comment ignores the fact that the 2017 CAAP Update now focuses on freight infrastructure to maximize the use of on-dock rail, as explained in Response to Comment NRDC-43. Furthermore, the Recirculated DSEIR (Section 3.1.4.4) considers the applicability of previous CAAP rail measures, including RL-2, and concludes that the LAHD is pre-empted by federal law from requiring or mandating that private rail companies operate certain types of locomotives within the Port.

Response to Comment NRDC-46

Please see Response to Comment SCAQMD-23 for a summary of current programs aimed at improving the efficiency of terminal operations, including truck activities, using "smart" logistic systems. The comment suggests FRATIS as one example and claims that the results of the demonstration project using FRATIS at the Port should have been discussed and considered in the SEIR. FRATIS is a trucking logistics system that is currently in the early stages of development and involves a 12-month demonstration project that is limited to ten trucks. Results of that demonstration project will likely not be available until mid-2020 and would be evaluated at that time by the drayage industry to determine its suitability. Regardless of the outcome of the demonstration project, the Port would not determine its use or deployment; that decision would be made by the drayage industry.

The Port does not dictate use of a specific operating system because terminals differ with respect to configuration, cargo types, and operating modes, such that each terminal must determine for itself the logistics system that best suits its needs. Requiring the CS Terminal to use, for example, FRATIS is not appropriate because that system is actually used by trucking companies for their operations, which they schedule directly with individual terminal operators. As previously mentioned, each terminal operator must determine the logistics system that best suits its needs; therefore, suggesting that the CS Terminal employ intelligent logistics systems that are in use at the Port of Long Beach's Middle Harbor or the Port's TraPac terminal is also not appropriate as a measure for this SEIR.

Response to Comment NRDC-47

The Recirculated DSEIR has considered all of the mitigation measures that can feasibly be applied to a single container terminal. The suggestion that refrigerated containers could be plugged into electrical outlets would not apply to the Revised Project because the WBCT already has plug-in stands for refrigerated containers (http://wbct.us/about-us/terminal-services/wbct-maintenance/). The 2008 EIS/EIR already contains mitigation measure MM AQ-21 for truck idling that is not being modified as part of the Revised Project for this SEIR. Constraints to imposing measures related to trucks (beyond limiting idling), locomotives, and harbor craft are described in Responses to Comments SCAQMD-11, NRDC-35, NRDC-43, NRDC-44, and NRDC-45. Without specific suggestions regarding other potential measures, no further response is required (PRC 21091(d); CEQA Guidelines Section 15204(a)).

Response to Comment NRDC-48

This is not a comment on the adequacy of the Recirculated DSEIR. As described in more detail in Response to Comment CSPNC-1, none of the elements requested – a discussion of the past, disclosure of the mitigation status of other projects, or formation of a committee to oversee port-wide compliance – is either within the scope of this SEIR or required by CEQA. Please note, however, that sections 1.2.3 and 1.2.4 of the Recirculated DSEIR already describe in adequate detail the background of the Revised Project, including the status of the lease with China Shipping and the reasons why some mitigation measures were not complied with.

Per CEQA, LAHD will adopt a mitigation monitoring and reporting program designed to ensure compliance with mitigation measures during the implementation of the Revised Project. CEQA does not mandate specific requirements for the program, but rather

provides substantial flexibility to lead agencies, such as LAHD, to adopt monitoring and reporting programs and tailor them to specific projects. There is no requirement under CEQA that LAHD must provide a full public accounting of past activities at the Project site, disclosure the mitigation and monitoring status of other projects or form a committee to oversee Port-wide compliance. Nonetheless, for non-CEQA purposes, the comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project.

As explained in Section 1.2.3.2 of the Recirculated DSEIR, the ASJ allowed for China Shipping to continue operating the terminal under the existing lease (Permit No. 999) signed in 2001. While the lease was supposed to have been amended after certification of the 2008 EIR, "[t]he preparation of an EIR is not generally the appropriate forum for determining the nature and consequences of prior conduct of a project applicant . . .." (Eureka Citizens for Responsible Gov't v. City of Eureka (2007) 147 Cal.App.4th 357, 371). As required under CEQA, the Recirculated DSEIR will be used by LAHD, as the lead agency under CEQA, in making a decision regarding the future operation of the Revised Project. If it is determined that changes to existing mitigation measures are recommended as a result of the Recirculated DSEIR, the Board of Harbor Commissioners will consider amending the lease for operations at Berths 97-109 to include those measures. Any action by LAHD to enforce mitigation measures (past or future), or other lease provisions, would be a separate proceeding outside the scope of this EIR process. In addition, please refer to Master Response 4: Non-Compliance with the FEIR Mitigation Measures.

Response to Comment NRDC-49

The Recirculated DSEIR does not ignore the issue of GHG impacts, but rather fully evaluates the GHG impacts of continued operation of the China Shipping Container Terminal under the Revised Project. That analysis describes the GHG-reducing effect of several of the mitigation measures that are components of the Revised Project and introduces two additional mitigation measures to be imposed on the Revised Project, to reduce its GHG impacts. The analysis in the Recirculated DSEIR quantifies GHG emissions from both stationary and mobile sources and assesses them using a 10,000 mty CO_2E threshold, adopted by the SCAQMD and determined by the LAHD as applicable to Port projects, compared to the 2008 Actual Baseline.

The Recirculated DSEIR discloses that GHG emissions under the Revised Project would exceed this threshold in all study years. This analysis complies with the requirements for determining the significance of GHG impacts under CEQA Guidelines section 15064.4. The Recirculated DSEIR further provides informational disclosure of comparative trends in GHG emissions under the Revised Project, the Revised Project as mitigated, and the project as originally approved in 2008 (the "FEIR Mitigated Scenario"), as well as determining the consistency or inconsistency of the Revised Project with certain statewide, regional and local plans and policies. The Recirculated DSEIR identifies feasible mitigation for the significant GHG emissions impacts, and in addition identifies LM GHG-1, a GHG Credit Fund that would be accomplished through a memorandum of understanding with the California Air Resources Board or other appropriate entity, under which the project site tenant shall either contribute to a fund for GHG-reducing projects and programs on Port of Los Angeles property or, if LAHD is unable to establish the fund within a reasonable period of time, purchase credits from an approved GHG offset registry.

The commenter is mistaken in asserting that the Revised Project must meet a zero net GHG standard, which is not a requirement of CEQA.

Response to Comment NRDC-50

LAHD disagrees with the commenter's statements concerning the analysis of energy impacts of the Revised Project, in Appendix E of the Recirculated DSEIR, under the standards in Appendix F of the State CEQA Guidelines. CEQA Guidelines Appendix F states that "the goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include the following: decreasing overall per capita consumption; decreasing reliance on fossil fuels such as coal, natural gas and oil, and increasing the reliance on renewable energy sources." One of the key objectives of the project approved in 2008 (the Approved Project) was to comply with the Port Strategic Plan to maximize the efficiency and capacity of terminals while raising environmental standards through application of all feasible mitigation measures, and one of the results of maximizing terminal efficiency is improved fuel efficiency. One of the purposes of the Revised Project is to further that objective by eliminating some previously adopted measures that have proved to be infeasible or unnecessary; instituting new, feasible, mitigation measures; and modifying other existing measures to enhance their effectiveness (Recirculated DSEIR Section 2.3).

Appendix F further states that "Potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project." The Revised Project and its overall objective were evaluated in Appendix E of the Recirculated DSEIR, which considered the six energy impact types listed in CEQA Guidelines Appendix F. Appendix E also identifies several mitigation measures included in the Revised Project that will increase efficient use of energy.

The analysis in Appendix E does not evaluate alternatives because, as explained in Section 1.7 of the Recirculated DSEIR, "[t]he proposed modifications to the mitigation measures in the Revised Project do not change the Approved Project as a whole and do not require that an alternative be developed that specifically addresses those particular modifications" (p. 1-34). Accordingly, the analysis in Appendix E evaluates baseline and future fuel consumption of the Revised Project, but cannot compare the Revised Project to alternatives.

Appendix E analyzes the Revised Project in terms of overall energy consumption and of energy efficiency, expressed as gallons of fuel used per TEU handled, under baseline and future conditions. It finds that, as a result of the projected fleet turnover of CHE, vessels, trains, and trucks, as well as the imposition of mitigation measures requiring phase-in, in the short term, of lower-emissions CHE, energy efficiency of the CS Terminal would improve in the future under the Revised Project (Appendix E p. E9). The analysis also finds that the Revised Project would have no adverse effects on energy resources. Appendix F of the CEQA Guidelines does not require that the goal of a project be "a zero net GHG and zero net energy facility". Accordingly, the analysis in Appendix E of the Recirculated DSEIR is consistent with the guidance in Appendix F of the CEQA Guidelines and therefore complies with CEQA.

Response to Comment NRDC-51

For the reasons set forth in this FEIR, including the responses to comments submitted on the Recirculated DSEIR, the LAHD has determined that there has been no addition of new information that deprives the public of a meaningful opportunity to comment on a

substantial adverse impact or feasible mitigation measures that have not been adopted, and that therefore recirculation is not required under the standards of CEQA (Public Resources Code section 21092.1; CEQA Guidelines section 15088.1).

Response to Comment NRDC-52

This is not a comment on the adequacy of the Recirculated DSEIR. Termination of the existing lease is outside the scope of this SEIR and is not required by CEQA. The comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

2.3.2.8 NRDC Attachment K1

Attachment K1

To: Melissa LinPerrella and David Petitt, NRDC
From: Dana Rowangould, Sustainable Systems Research, LLC
Subject: China Shipping Container Terminal: Excess Emissions from Modified FEIR Mitigations
Date: November 14, 2018

The air quality impacts from the construction and operation of the China Shipping Container Terminal at Berths 97-109 of the Port of Los Angeles (Port) were evaluated in the 2008 Berths 97-109 (China Shipping) Container Terminal Project Final Environmental Impact Statement/Environmental Impact Report (FEIR). Several of the mitigation measures included in the FEIR have not been implemented fully.

In 2018 the Berths 97-109 (China Shipping) Container Terminal Recirculated Draft Supplemental EIR (RDSEIR, or Revised Plan) proposed modifying the emissions mitigations. The RDSEIR analysis includes emissions estimates for several model years, including past years that account for the failure to implement several measures (2012, 2014) and future years that account for the modification to future mitigation activities (2018, 2023, 2030, 2036, 2045). Modified mitigation measures affected emissions from Port cargo handling equipment (AQ-15, 16, 17; which have been modified merged into AQ-15 and 17), drayage trucks (AQ-20, which has been removed), and ocean-going vessels (AQ-9 and 10; which have been modified).

The purpose of this memo is to quantify and illustrate the excess emissions (emissions reductions lost) during the project period (2009 to 2045) due to the modification of mitigation measures at the China Shipping Container Terminal. Key findings are summarized below, while the remainder of this memo describes our analysis methods and results.

Key Findings:

- From 2009 to 2045, the change in mitigations will result in total excess emissions of 1400 tons of NO_X, 192 tons of VOCs, 3,623 tons of CO, 19 tons of PM2.5, 20 tons of PM10, 25 tons of SO_X, and 54 tons of DPM.
- The excess NO_X emissions are equivalent to a typical coal-fired power plant operating for approximately 11 months.
- The excess NO_X, VOC, CO, PM2.5, PM10, SO_X, and DPM that will be emitted from 2009 through the present (2018) are the equivalent of:
    - 120, 300, 680, 79, 55, 730, and 170 million truck miles traveled in 2018, respectively;
    - Emissions from 59,000; 99,000; 280,000; 27,000; 23,000; 590,000; and 45,000 trucks traveling for the entire period from 2009 to 2018, respectively; or

    - 75%, 130%, 360%, 35%, 30%, 730%, and 61% of all heavy duty truck emissions occurring within the SCAB region for the entire period from 2009 to 2018, respectively.
- The excess NO_X, VOC, CO, PM2.5, PM10, SO_X, and DPM that will be emitted from 2009 through 2045 are the equivalent of:
    - 210; 700; 2,400; 140; 96; 1,500; and 520 million truck miles traveled in 2018, respectively;
    - Emissions from 56,000; 180,000; 480,000; 32,000; 21,000; 400,000; and 110,000 trucks traveling for the entire period from 2009 to 2045, respectively; or
    - 59%, 200%, 490%, 35%, 22%, 390%, and 140% of all heavy duty truck emissions occurring within the SCAB region for the entire period from 2009 to 2045, respectively.

Methods and Results

Estimating Excess Emissions Due to China Shipping Mitigation Modifications

NRDC.K1-1

In the RDSEIR annual emissions were modeled for each source (including cargo handling equipment, drayage trucks, and ocean-going vessels), each pollutant, each scenario (FEIR, Revised Plan), and in each modeled year (2008, 2012, 2014, 2018, 2023, 2030, 2036, 2045). Emissions totals for each source, pollutant, modeled year, and scenario are shown in Tables B1-661 and B1-669 of the RDSEIR. Note that the "Revised Plan Scenario" definition used here encompasses the past and present failure to meet FEIR mitigation commitments (2009 to 2018) as well as future changes to mitigations (2009 onward), as shown in Table 3.1-1 in the RDSEIR.

To estimate the excess emissions (FEIR emissions subtracted from Revised Plan Emissions) in *intervening years* which were not modeled in the RDSEIR (e.g. 2009 – 2011, 2013, 2015 – 2017, etc.) we performed the following calculations. References to tables refer to tables found in Chapters 2, 3, and Appendix B1 in the RDSEIR.

Ocean going vessels:

NRDC.K1-2

The excess hoteling emissions are attributable to changes in AQ-9 (which requires auxiliary marine power, or AMP) starting in 2010. Excess transit emissions are attributable to changes in ASQ-10 (which requires vessel speed reductions, or VSR, for travel in part of the region) starting in 2009.

To estimate annual excess emissions in intervening years, we multiply the number of excess higher emitting vessels in each intervening year by the amount of excess emissions per excess higher emitting vessel. This calculation is described in more detail below.

Excess Hoteling and Transit Emissions in Modeled Years

Ocean going vessel emissions in modeled years were first split between hoteling, anchorage, and transit activities.[i] The excess emissions ($ExcessEmissions$) for each activity and year were calculated as the Revised Plan emissions ($Emissions_{RevisedPlan}$) minus the FEIR emissions ($Emissions_{FEIR}$) (Eq 1):

$$ExcessEmissions = Emissions_{RevisedPlan} - Emissions_{FEIR} \quad [1]$$

Number of Excess Higher Emitting Vessel Calls

The number of vessels that emit higher levels of hoteling emissions ($Vessels_{HighEmitting}$) due to a failure to use auxiliary marine power (AMP) for each year under the FEIR and Revised Plan was estimated by multiplying the number of ocean going vessels that visit the Port each year ($Vessels_{All}$)[ii] by the share of ships that do not use AMP in each scenario and year as described in the RDSEIR ($Share_{nonAMP}$)[iii] (see Eq 2). The number of excess non-AMP vessels was

NRDC.K1-2

calculated as the number of non-AMP vessels under the FEIR subtracted from the number of non-AMP vessels under the Revised Plan, for each year (Eq 3).

$$Vessels_{HighEmitting} = Vessels_{All} * (Share_{nonAMP}) \quad [2]$$

$$ExcessVessels_{HighEmitting} = Vessels_{HighEmittingRevisedPlan} - Vessels_{HighEmittingFEIR} \quad [3]$$

The number of excess vessels that emit higher levels of transit emissions due to a failure to adopt VSR in the area indicated by AQ-10 is estimated similarly to the calculation for hoteling emissions above, except that the share of vessels not using VSR[iv] is used in place of the share of vessels not using AMP.

Excess Emissions Per Higher Emitting Vessel

The rate of excess hoteling emissions per non-AMP vessel ($ExcessRate$) was obtained by dividing excess hoteling emissions by the number of excess non-AMP vessels in modeled years (Eq 4). The rate of excess hoteling emissions per non-AMP vessel was then linearly interpolated for intervening years that occur between 2013 and 2045 while 2009 to 2011 rates were assumed to equal the 2012 modeled value.

$$ExcessRate = \frac{ExcessEmissions}{ExcessVessels_{HighEmitting}} \quad [4]$$

The rate of excess transit emissions per non-VSR vessel was estimated similarly by using excess transit emissions and the number of excess non-VSR vessels in each project year.

Excess Emissions in Intervening Years

The rate of excess hoteling emissions per excess non-AMP vessel was then multiplied by the number of excess non-AMP vessels to arrive at the estimate of excess hoteling emissions in each intervening project year (Eq 5).

$$Annual\ Excess\ Emissions = ExcessRate * ExcessVessels_{HighEmitting} \quad [5]$$

The excess transit emissions were estimated similarly using the rate of excess transit emissions per non-VSR vessel and the number of excess non-VSR vessels in each project year.

Drayage Trucks:

NRDC.K1-3

Drayage truck emissions of diesel particulate matter (DPM) are expected to be affected by changes in the liquefied natural gas (LNG) requirements under AQ-20 starting in 2012. Because emissions of NO_X, VOC, CO, PM2.5, PM10, and SO_X are modeled as unchanged in the RDSEIR (which assumes that the fleet wide emissions factors for all pollutants except DPM are the same in the two scenarios) we assume they are unchanged in intervening years. The overall modeling approach was similar to the approach used for ocean going vessels – the excess truck emissions

were estimated based on the number of non-LNG vehicles and the excess truck emissions per excess non-LNG vehicle in each year.

Excess Truck Emissions in Modeled Years

On-site and off-site truck emissions for each scenario and each modeled year[v] were summed to obtain total truck emissions in each scenario. The excess total truck emissions under each scenario was calculated as FEIR emissions subtracted from the Revised Plan emissions.

Number of Excess Higher Emitting Truck Calls

For the intervening year 2013, truck calls were estimated by multiplying estimated truck calls per TEU[vi] by actual throughput in TEUs[vii]. Truck calls for intervening years between 2014 and 2045 were linearly interpolated from modeled years.[viii] The share of trucks using LNG under each scenario[ix] was multiplied by truck calls in each year to estimate the number of non-LNG truck calls in each scenario and year (similar to Eq 2, except using total truck calls instead of vessels and the share of trucks that are non-LNG instead of the non-AMP share.) The number of excess non-LNG trucks was calculated as the number of non-LNG truck calls under the FEIR subtracted from the number of non-LNG truck calls under the Revised Plan (similar to Eq 3, except with non-LNG trucks instead of vessels).

NRDC.K1-3

Excess Emissions Per Higher Emitting Truck

The rate of excess truck emissions per non-LNG truck call was obtained by dividing excess truck emissions by the number of excess non-LNG truck calls in modeled years. This calculation is similar to Eq 4, except using truck emissions and the number of non-LNG trucks. The rate of excess truck emissions per non-LNG truck call was then linearly interpolated for intervening years that occur between 2013 and 2045.

Excess Emissions in Intervening Years

The rate of excess truck emissions per excess non-LNG truck call was then multiplied by the number of excess non-LNG truck calls to arrive at the estimate of excess truck emissions in each intervening project year (similar to Eq 5, except using the number of non-LNG trucks).

Cargo Handling Equipment:

NRDC.K1-4

Changes in AQ-15, AQ-16, and AQ-17 are expected to affect emissions from cargo handling equipment. Due to the complexity of these rule changes and their effects on emissions from several different types of cargo handling equipment, the excess emissions in intervening years was simply linearly interpolated[x] from excess emissions exhibited in modeled years[xi].

Total Excess Emissions:

NRDC.K1-5

Excess emissions estimates from the three source types are summed for all analysis years and for the period up through the present in Table 1. The bottom row of the Table indicates the share of excess emissions that are expected to be emitted by the end 2018.

NRDC.K1-5

Table 1: Total Tons of Excess Emissions for the period from 2009 to 2045

	NO_X	VOC	CO	PM2.5	PM10	SO_X	DPM
Through the Present: 2009 to 2018							
Trucks	-	-	-	-	-	-	8
OGV	191	4	18	4	4	13	4
CHE	588	77	1016	7	7	0	5
TOTAL	**778**	**82**	**1034**	**11**	**12**	**12**	**18**
Future Years: 2019 to 2045							
Trucks	-	-	-	-	-	-	24
OGV	283	11	33	7	8	13	8
CHE	339	99	2556	2	1	0	4
TOTAL	**621**	**110**	**2589**	**9**	**8**	**13**	**36**
All Years: 2009 to 2045							
Trucks	-	-	-	-	-	-	33
OGV	474	15	51	11	12	25	12
CHE	926	177	3572	8	8	0	9
TOTAL	**1400**	**192**	**3623**	**19**	**20**	**25**	**54**
Share Emitted by 2018	**56%**	**42%**	**29%**	**55%**	**58%**	**49%**	**33%**

Estimating Equivalent Emissions from Other Activities

NRDC.K1-6

Coal-Fired Power Plant

We estimate typical annual coal-fired power plant emissions of 1,541 tons of NO_X based on 2016 EPA data.[xii] The excess NO_X emissions of 1400 tons from the change in China Shipping mitigations is approximately equivalent to the NO_X emissions from a typical coal-fired power plant operating for approximately 11 months.

Heavy Duty Truck Emissions

NRDC.K1-7

Emissions Rates

We estimate typical heavy duty truck emissions for all heavy duty trucks traveling within the South Coast Air Basin (SCAB Trucks), including emissions from exhaust, brake wear, and tire wear but excluding road dust. [xiii] We estimate emissions per mile for a typical truck in 2018. We also estimate emissions of *one typical truck* traveling for the 10 year period up to the present (2009 to 2018) and for one typical truck traveling for the entire 37 year project analysis period (2009 to 2045). We also estimate total emissions from *all trucks* (the entire fleet) traveling within the SCAB for the periods from 2009 to 2018 and 2009 to 2045. Results are shown in Table 2.

NRDC.K1-7

Truck Equivalents

The number of trucks that are equivalent to the excess emissions from the modified mitigations at the China Shipping Terminal are shown in Table 3. For each period evaluated (up to the present and the entire analysis period), we estimate emissions from the equivalent number of trucks traveling for the entire period as well as the equivalent percentage of emissions from the entire truck fleet, which represents all heavy duty truck emissions that occur within the SCAB. We also estimate the equivalent miles traveled in 2018 for each excess emissions estimate.

From Table 3, we see that the excess diesel particulate (DPM) emissions that will occur by the end of 2018 due to the modified China Shipping mitigations are equivalent to 170,000,000 heavy truck miles traveled in the region in 2018, or to the DPM emissions from 45,000 heavy trucks traveling for the entire period from 2009 to 2018. This is equivalent to 61% of the DPM emitted by the entire fleet (all heavy duty trucks) traveling within the South Coast Air Basin (SCAB) for the entire period from 2009 to 2018. Equivalencies for other pollutants range from 55 to 730 million truck miles in 2018; emissions from 23,000 to 590,000 trucks traveling for the entire period; and 61% to 730% of the entire fleet's emissions within the SCAB region.

Looking at the period from 2009 to 2045, the excess DPM emissions due to the modification of the China Shipping mitigations are equivalent to 520 million truck miles in 2018, or DPM emissions from 110,000 heavy trucks traveling for the entire period from 2009 to 2045. This is equivalent to 140% of the DPM emissions from the entire fleet (all heavy duty trucks) traveling in the South Coast Air Basin for the entire period from 2009 to 2045. Equivalencies for other pollutants range from 96 to 1,500 million truck miles in 2018; emissions from 21,000 to 480,000 trucks traveling for the entire period; and 22% to 490% of the entire fleet's emissions in the SCAB region.

Table 2: Truck emission rates in the South Coast Air Basin

	NO_X	VOC	CO	PM2.5	PM10	SO_X	DPM
SCAB Truck Emissions Rates							
Tons per mile in 2018	6.7E-06	2.8E-07	1.5E-06	1.4E-07	2.1E-07	1.7E-08	1.0E-07
Tons per truck:							
Traveling for 10 years (2009 to 2018)	1.3E-02	8.3E-04	3.7E-03	4.0E-04	4.9E-04	2.1E-05	3.9E-04
Traveling for 37 years (2009 to 2045)	2.5E-02	1.1E-03	7.6E-03	6.1E-04	9.3E-04	6.3E-05	4.8E-04
Tons from the entire fleet (all truck travel in SCAB):							
Traveling for 10 years (2009 to 2018)	1034	63.9	285	31.1	38.6	1.7	28.9
Traveling for 37 years (2009 to 2045)	2381	93.6	738	55.2	89.0	6.5	38.5

Table 3: Heavy Duty Truck Emissions Equivalence to Excess Emissions

	NO_X	VOC	CO	PM2.5	PM10	SO_X	DPM
10 Years through the present: 2009 to 2018							
Million Truck Miles in 2018	120	300	680	79	55	730	170
Trucks traveling for the entire (10-year) period	59,000	99,000	280,000	27,000	23,000	590,000	45,000
Share of fleet (all SCAB trucks) travel for entire period	75%	130%	360%	35%	30%	730%	61%
37-year Analysis Period: 2009 to 2045							
Million Truck Miles in 2018	210	700	2,400	140	96	1,500	520
Trucks traveling for the entire (37-year) period	56,000	180,000	480,000	32,000	21,000	400,000	110,000
Share of fleet (all SCAB trucks) travel for entire period	59%	200%	490%	35%	22%	390%	140%

[i] Emissions data by activity are presented in tables B1-117, 119, 121, 123, 125, 127, 129, 131, 145, 147, 149, 151, 153, 155, 157, and 159 of the RDSEIR. Because the total of these three activity types did not correspond to the totals shown in B1-661 and B1-669 (it appeared that several pollutant/year combinations were erroneously switched), we corrected these values by switching the activity-specific and total values correspond to the totals in B1-661 and B1-669. Below is a table summarizing the corrections made to the total values in the FEIR scenario data (in tons per year). Colors indicate rows that correspond, where values were switched. We made analogous corrections to FEIR emissions by activity as well as to totals and emissions by activity in the Revised Plan data.

	Raw OGV activity totals (from B1-117 to B1-131)			**Corrected OGV activity totals**		
	2008	**2012**	**2018**	**2008**	**2012**	**2018**
HC	3.11	1.13	3.22	2.63	4.07	15.91
PM2.5	2.63	4.07	15.91	3.20	1.13	3.82
PM10	43.14	4.95	9.54	4.00	1.22	4.14
SO_X	4.00	6.53	21.9	43.14	4.95	9.54
CO	4.00	1.22	4.14	4.00	6.53	21.90
DPM	3.20	1.13	3.82	3.11	1.13	3.22

We examined the PM emissions data with and without these corrections and the corrected PM data (which assumed that B1-661 and B1-669 were correct) appears to correspond more closely to what we would expect based on trends in peak emissions shown in the RDSEIR.

[ii] Table 2.3 provides vessel calls for modeled years. These values are consistent with the values in Tables B1-106 and B1-134, corresponding to half of the "total number of transits" except where there appear to be typos in the sum column in the Appendix B tables. Intervening years were linearly interpolated.

[iii] Under the FEIR, we use actual compliance rates from Table 2.1 in 2008 and 2009, and the FEIR committed compliance rates from 2010 to 2045. Under the Revised Plan, we use actual compliance in 2008 to 2017 from Table 2.1, in 2018 we assume the actual compliance rate from 2017 is repeated, and in 2019 to 2045 we assume the Revised Plan compliance requirement of 95%.

[iv] As described in Table 2.1 of the RDSEIR.

[v] From Tables B1-661 and B1-669.

[vi] Truck calls and throughput (in TEUs) in modeled years were obtained from Table 2.3. Truck calls per TEU were then estimated for modeled years 2012 and 2014. The rates of trucks calls per TEU in 2013 was linearly interpolated.

[vii] From Table 2.2.

[viii] Truck calls in modeled years were obtained from Table 2.3.

[ix] Based on FEIR requirements and the Revised Plan rates of LNG use indicated in Appendix B1.

[x] This simplification is consistent with the linear interpolation approach used in the health risk assessment included in the RDSEIR. Additionally, we compared our total 2009 to 2045 excess emissions estimates for ocean going vessels and drayage trucks to estimates based on simple linear interpolation; differences ranged from -7% to 6%.

[xi] As shown in Tables B1-661 and B1-669.

[xii] "2016 vs 2017 SO_2, NO_X, and CO_2 Comparisons, Annual. Acid Rain Program and Cross-State Air Pollution Rule Emissions, Emissions Rates, and Heat Input Changes at Facilities (Coal Units Only)" is available at https://www.epa.gov/sites/production/files/2018-02/arpcaircoal16vs17annual_0.xls. 2016 is the most recent year available that is not preliminary. The median NOx emissions from all facilities listed is used to represent a typical coal-fired power plant emissions of NO_X.

[xiii] EMFAC2017v1.0.2 is used to estimate annual emissions, truck miles traveled, and truck populations for both truck categories in each year in the South Coast Air Basin. The heavy duty truck category includes POLA trucks in the SCAB region. DPM estimates are based on PM10 exhaust emissions from diesel truck categories.

Response to Comment NRDC.K1-2

LAHD understands the interpolation-based methodology applied by the commenter to estimate approximate intervening years' OGV emissions. However, the LAHD considers that this type of analysis is not an accurate representation of vessel mass emissions for those intervening years because it does not consider annual fluctuations in vessel fleet behavior, such as the number of vessel calls, the mix of vessel sizes and tier levels of their engines visiting a particular year, and their AMP-capability, none of which is linear. Presenting this type of information would be speculative, and in any case CEQA does not require a bottom-up emissions analysis for every analysis year. Doing so would be onerous and would produce too much information to incorporate into a comprehensible document.

Response to Comment NRDC.K1-3

The LAHD considers that the interpolation-based analysis employed by the commenter is not an accurate representation of drayage truck PM_{10} (and associated DPM) mass emissions for intervening years because it does not consider link-level emissions, which use speed-based emission factors throughout the modeled network of off-site truck trips. This influences the off-site emissions at each modeled location, the summation of which yields the total off-site emissions used in emissions impact estimates.

Response to Comment NRDC.K1-4

The LAHD considers that the interpolation-based analysis employed by the commenter is not an accurate representation of CHE mass emissions for intervening years as it does not reflect the year-to-year fluctuations in emissions caused by deterioration and equipment turnover, whether naturally (due to equipment end-of-life scrappage) or as a result of mitigations. CHE emission factors used for analysis in the Recirculated DSEIR did account for those effects, which explains why the resulting CHE emissions do not follow a clear linear increasing or decreasing trend across analyzed years.

Response to Comment NRDC.K1-5

The LAHD considers that, given the caveats to the commenter's calculations described in Responses to Comment NRDC.K1-1 through NRDC.K1-4, commenter's Table 1 does not provide any meaningful determination of total tons of so-called "excess emissions." More accurate estimates are presented in the Recirculated DSEIR, as described in Response to Comment NRDC-10.

Response to Comment NRDC.K1-6

The LAHD does not consider that the juxtaposition of mass emissions from a coal-fired power plant during a short period (less than one year) with the aggregated yearly emissions over 37 years from the mobile sources of the Revised Project provides any meaningful determination for purposes of CEQA.

Response to Comment NRDC.K1-7

With regard to the comment's estimate of "typical heavy-duty truck emissions…per mile for a typical truck in 2018" and estimates presented in commenter's Tables 2 and 3, LAHD notes that the numerous methodological differences between the approach used by the commenter and the Recirculated DSEIR's air quality analysis mean that the emissions estimates from the two documents are in no way comparable.

The emission rates, i.e., emissions per mile, used in the Recirculated DSEIR air quality analysis were based on the age distribution of the port-area drayage truck fleet for each modeled year. This approach differs greatly from the commenter's use of EMFAC2017's default age distribution for diesel heavy-duty trucks because the EMFAC distribution combines not only a "default" age mix for the port drayage fleet, but also emissions and activity from other diesel heavy-duty truck fleets in the South Coast air district. Given the very different duty cycles and age distributions of non-port drayage fleets, the EMFAC data are bound to be very different in terms of a composite gram-per-mile rate. In addition, the Recirculated DSEIR emission rates are link-speed based whereas the commenter's analysis appears to use the default speed distribution in EMFAC. In addition, it is not clear what trip mileage is considered in the commenter's analysis. The Recirculated DSEIR's analysis accounts for on-site travel distance and trip distances derived from network ground transportation modeling for off-site trucks.

The Recirculated DSEIR does not calculate either combined-years emissions for a typical truck or total South Coast fleet wide emissions (Table 3) as that information is not required by CEQA and does not provide any useful information about the Revised Project.

It is not also not clear if the commenter's analysis only involves off-site truck activity or both on-site and off-site trucks activity. PM_{10} (and thus, DPM) and other key pollutant emission rates (e.g., NO_X, VOC and CO) change significantly with vehicle speed, which is significantly less on site than off site. Hence, the commenter's analysis does not provide an apple-to-apples comparison to evaluate truck-related DPM emissions, or any other pollutant, from the Recirculated DSEIR, as it lacks the port-specific information that was used in the Recirculated DSEIR.

Finally, CEQA does not require a calculation of "excess emissions," as the non-CEQA term is used by the commenter, for each year of the study period, as explained in Response to Comment NRDC.K1-1.

2.3.2.9 NRDC Comment Letter on the 2017 DSEIR

& San Pedro and Peninsula Homeowners' Coalition
San Pedro Peninsula Homeowners United
Urban and Environmental Policy Institute, Occidental College

City of Los Angeles Harbor Department
Christopher Cannon, Director
Environmental Management Division
P.O. Box 151
San Pedro, CA 90733-0151
ceqacomments@portla.org
Via Email and Courier

September 29, 2017

Re: Draft Supplemental Environmental Impact Report – Berths 97-109 [China Shipping] Container Terminal Project

Dear Mr. Cannon,

On behalf of the Natural Resources Defense Council, San Pedro and Peninsula Homeowners' Coalition, San Pedro Peninsula Homeowners United, Coalition for Clean Air, East Yard Communities for Environmental Justice, Long Beach Alliance for Children with Asthma, and Urban & Environmental Policy Institute, Occidental College, we provide comments on the Draft Supplemental EIR for Berths 97-109, China Shipping Container Terminal (SDEIR). Several of us litigated over the expansion of the China Shipping terminal nearly two decades ago, a project which the Court of Appeal held violated the California Environmental Quality Act (CEQA). All of us advocate to reduce smog-forming pollution, diesel emissions, and greenhouse gases from port operations, which contribute to violations of air quality standards, increased impacts upon public health—particularly in environmental justice communities, and global climate change. Accordingly, we have a strong interest in ensuring that the SDEIR discloses the environmental and health impacts of the China Shipping project and sets forth all feasible mitigation.

These comments are directed to the SDEIR and do not address the Port's violations of the 2004 Amended Stipulated Judgment (the Amended Stipulated Judgement or ASJ). *NRDC et al. v. City of Los Angeles et al.*, No. BS 070017 (Cal. Sup. Crt. June 14, 2004) (Amended Stipulated Judgment, Modification of Stay, and Order thereon). All signatories to this letter who were parties or members of parties involved in the ASJ reserve all rights with respect to breaches of the ASJ, and note that the Port's obligations under the ASJ are separate from and in addition to those required under CEQA.

Our comments are supported by documents provided to you on a hand-delivered flash drive, and within a drop box folder provided to you in the email transmission containing our electronic comments. The documents on the flash drive and within the drop box folder are the same. All documents are listed in the attached index.[1]

Our written comments below are organized as follows:

FACTUAL CONTEXT AND SUMMARY OF CONCERNS

NRDC DSEIR-1

The public has had a long and complicated relationship with the Port's management of the China Shipping terminal.

In 2001, signatories to this letter challenged the Port's plans to expand the terminal, asserting in large part that the expansion would result in undisclosed and unmitigated air pollution in violation of CEQA. In 2002, the Court of Appeal agreed with those concerns and enjoined the Port from further construction and operation of the terminal pending preparation of a project-

[1] On the flash drive, the electronic file for each document is assigned an "Attachment" number. Each attachment and corresponding document is listed in the accompanying index. Attachments are referenced herein as ("Attachment XX"). Attachments consisting of documents produced in response to Public Records Act requests are also bates stamped.

NRDC DSEIR-1

specific environmental impact report (EIR). In 2004, the Port and City entered a settlement agreement with the litigants that required, among other things, that project-specific EIR, which was completed and certified by the Board of Harbor Commissioners in December 2008. In the 2008 EIR, the Port committed to implement pollution-cutting measures for the China Shipping project. In 2015, the Port revealed that it violated that commitment.

In documents obtained through Public Records Act requests,[2] the facts reveal that only several months after the Port certified the 2008 EIR, the Port began providing waivers to China Shipping excusing it from complying with a key commitment in the EIR: that ships utilize shore-power. These waivers were granted behind closed doors, not just once but at least five times, to excuse noncompliance for over 4 years up until the shore-power requirements were mandated by state law.[3] During that time, the Port also failed to enforce measures that would have further reduced pollution from ships, as well as trucks and cargo handling equipment.

In 2015, when the Port disclosed that it had not implemented all of the EIR's measures, it committed to perform a new environmental study (the SDEIR) to explain why mitigations went un-implemented, and to identify replacement measures to ensure the China Shipping project fully complies with CEQA. Unfortunately, the SDEIR is inadequate in both respects.

The SDEIR claims that air pollution control measures the Port committed to in 2008 are now infeasible. Yet, none of the Port's "evidence" adequately explains how measures the Port certified in 2008 as economically, technologically, and operationally feasible, became impracticable. Instead, it appears that the deadlines for completing the mitigations became more difficult due to the Port and China Shipping's own neglect and delay.

Tellingly, when the 2008 EIR was certified, China Shipping never contended that any of the measures were infeasible. And over the course of the last ten years, the shipping line has largely ignored requests from the Port to explain its noncompliance. Indeed, in a letter dated as late as January of this year—just nine months ago—the Port maintained that China Shipping had not provided meaningful information demonstrating infeasibility.[4] The Port even acknowledged in a previous letter to China Shipping that noncompliance with the 2008 measures risked shutting down the entire terminal.[5] Caught between China Shipping's silence and the Port's CEQA obligations, the Port began creating its own record of purported infeasibility in anticipation of litigation.

The primary result of the Port's actions is that for more than a decade, emissions from the China Shipping terminal have been higher than they should have been. And to make matters worse, the SDEIR does not provide an assessment of this harm, let alone a sufficient remedy.

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[2] *See generally* Attachments A1–A208.
[3] *See* Attachment A13 (POLA000633–34); Attachment A23 (POLA000822–23); Attachment A25 (POLA00825–26); Attachment A61 at POLA001429–30; Attachment A62 at POLA001462.
[4] Attachment A63 at POLA001476-77.
[5] Attachment A30 (POLA000979–86).

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The SDEIR never quantifies how much additional NOx or PM local communities shouldered over the last decade. Instead, it responds that pollution levels from the terminal were not as bad as predicted in the 2008 EIR—implying that any "excess emissions" were previously studied, so no harm was committed. Such posturing is remarkable. Inflated emissions projections in a decade old environmental study do not excuse the Port from quantifying the actual, additional pollution that communities shouldered from terminal operations. These excess emissions must now be mitigated prospectively, and an honest accounting of this pollution is the first step to ensuring that all feasible mitigations are adopted for the revised project.

Given this failure, it's no surprise that the SDEIR's revised mitigation measures are unresponsive to the project's full scope of emissions. The revised measures also fail to account for technological advancements at other terminals, more aggressive measures the Port has required of its own tenants, the San Pedro Bay Ports' Draft Clean Air Action Plan, and the Mayors' zero emission goals.[6]

The SDEIR also fails to assess adequately and mitigate the project's greenhouse gas emissions, and preform the requisite energy conservation analysis mandated by CEQA.

In short, the Port just can't seem to get it right when it comes China Shipping. For nearly two decades, this terminal has been embroiled in broken promises, litigation, and CEQA non-compliance. Instead of turning a new page, the SDEIR repeats too much of the past. For the reasons outlined below, the SDEIR must be revised to comply with the law.

ERRORS IN THE SDEIR

The China Shipping terminal will use ships, tugboats, trucks, trains, and cargo handling equipment that emit diesel exhaust, smog-forming pollutants, and greenhouse gases. In 2036, the project is expected to handle nearly 1.7 million TEUs that will be supported by 156 vessel calls per year and over 1.5 million truck trips annually. SDEIR at 2-12, Table 2-3. The project is located in an air basin that violates national air quality standards for ozone and particulate matter, and in a State that has set a high bar for reducing climate changing pollutants. The highest modeled air toxics risk in the air basin remains near the ports, even though progress has been made over the last decade. SDEIR at 3.1-10. The SDEIR acknowledges numerous sensitive receptors in the communities near the terminal, including schools, day care centers, medical facilities, and recreational areas whose users will be disproportionately impacted by the project. SDEIR at 3.1-11, Figure 3.1-1.

[6] Joint Directive, Los Angeles Mayor Eric Garcetti & Long Beach Mayor Robert Garcia, Creating a Zero Emissions Goods Movement Future: A Joint Declaration of the Mayors of the Cities of Los Angeles and Long Beach (Attachment D5); Press Release, City of Los Angeles, Mayor Garcetti and Long Beach Mayor Robert Garcia Announce Zero Emissions Goals for San Pedro bay Ports (June 12, 2017), *available at* https://www.lamayor.org/mayor-garcetti-and-long-beach-mayor-robert-garcia-announce-zero-emissions-goals-san-pedro-bay-ports (Attachment H7).

NRDC DSEIR-1

As discussed below, the SDEIR fails to adequately analyze or mitigate the effects of the Revised Project on these communities, and on global climate change.

I. THE SDEIR'S 2014 BASELINE VIOLATES CEQA

NRDC DSEIR-2

The Port's failure to comply with legally-binding mitigation measures created excess emissions that would not have occurred had the Port complied with the law. Rather than own their mistake and try to fix it, in the SDEIR the Port tries to hide the extent of the excess emissions by creating a fictitious baseline that ignores them. Such tactics are factually and legally unsupportable.

The SDEIR utilizes a "2014 Mitigated Baseline" and a "2014 Unmitigated Baseline" to determine whether the project results in significant air quality impacts. SDEIR at 3.1-42 to 3.1-63. The SDEIR defines these terms as follows:

> 1) 2014 Unmitigated Baseline – this scenario refers to activity levels, equipment and throughput as they occurred in the year 2014 including those mitigation measures required by the 2008 EIS/EIR that have already been implemented;
>
> 2) 2014 Mitigated Baseline – this scenario refers to activity levels and throughput as they occurred in the year 2014, modified to show application of all mitigation measures required at the time by the 2008 EIS/EIR (i.e. both those mitigation measures that have already been implemented and those that have not been implemented).

SDEIR at App. B1-4. In simple terms, the "unmitigated baseline" is based on actual terminal activities and only the mitigation measures that were complied with. The "mitigated baseline" assumes actual terminal activities and the counterfactual assumption that the Port fully complied with all 2008 mitigation measures.[7]

As discussed below, the SDEIR's reliance on a 2014 baseline is contrary to applicable caselaw, and excludes from analysis, disclosure, and mitigation, emissions generated before 2014 and which necessitated the current SDEIR.

Below, we (1) outline the legal requirements for determining the CEQA baseline; (2) assert that 2000–2001 is the proper baseline for the project under CEQA review; (3) describe how using a 2014 baseline hides environmental impacts attributable to the Revised Project; (4) provide examples of how a 2000–2001 baseline would provide valuable information; and (5) explain how the SDEIR fails to provide an adequate justification for its 2014 baseline.

[7] As discussed below, we agree that the SDEIR should compare the years when the 2008 measures were to phase in with the years when the measures were not implemented (before and after 2014). Data underlying the 2014 Mitigated and Unmitigated Baselines could thus be used for that purpose. It should not be used, however, as the CEQA baseline for the project.

NRDC DSEIR-2

A. Legal Requirements for CEQA Baselines

Baseline conditions are normally the environmental conditions that exist at the commencement of the environmental review of the project. CEQA Guidelines § 15125(a); *POET v. Cal. Air Resources Bd.*, 12 Cal.App.5th 52, 57 (Cal.Ct.App. 2017). Stated differently, the baseline normally consists of pre-project conditions or conditions "absent" the project. *See Communities for a Better Env't v. S. Coast Air Quality Mgmt. Dist.*, 48 Cal.4th 310, 315 (Cal. 2010); *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*, 57 Cal.4th 439, 447 (Cal. 2013). When an agency selects a different baseline, it must provide an adequate justification. *POET*, 12 Cal.App.5th at 79.

Adequate justifications include substantial evidence demonstrating that departing from the normal baseline "promotes public participation and more informed decisionmaking by providing a more accurate picture of a proposed project's likely impacts," or that a pre-project conditions baseline would be misleading, or provide no or little relevant information. *POET*, 12 Cal.App.5th at 79 (quoting *Neighbors*, 57 Cal.4th at 453, 513).

As recognized recently by the Court of Appeal, determining the appropriate baseline requires accurately defining the CEQA "project" subject to environmental review. *POET*, 12 Cal.App.5th at 77 ("When the whole of a project is properly identified, then the conditions defining the project's baseline can be determined."). A "project" is "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, and . . . that involves the issuance to a person of a lease, permit, license, certificate, or other entitlement for use by one or more public agencies." Cal. Pub. Res. Code § 21065. This definition is further augmented by the CEQA Guidelines, which defines a "project" as "the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment...." CEQA Guidelines § 15378, subd. (a); *Toulumne County v. City of Sonora*, 155 Cal.App.4th 1214, 1222 (Cal.Ct.App. 2007).[8]

B. The Proper CEQA Baseline in This Case Is 2000–2001

Here, the project approved in 2008 *and* the revisions proposed in the SDEIR are part of a single CEQA project; these activities represent the "whole of the action." *See POET*, 12 Cal.App.5th at 73–77 (holding that the agency's original low-carbon fuel standard (LCFS) regulations and revised LCFS regulations constituted a single project). The SDEIR appears to adopt this view when it defined the "Revised Project" as the "the continued operation of the CS Container

[8] Courts broadly interpret the term "project" in an effort "to afford the fullest possible protection to the environment." *Toulumne County*, 155 Cal.App.4th at 1222–23 (citing California Supreme Court and Court of Appeal cases). This broad interpretation ensures that "the requirements of CEQA 'cannot be avoided by chopping up proposed projects into bite-size pieces' which, when taken individually, may have no significant adverse effect on the environment." *Id.* at 1223 (citing *Plan for Arcadia v. City Council of Arcadia*, 42 Cal.App.3d 712, 726 (Cal.Ct.App. 1979)).

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Terminal[9] under new and/or modified mitigation measures . . . compared to those set forth in the 2008 EIS/EIR for the Approved Project." SDEIR at 2-11; *see also* Notice of Preparation of a Draft Supplemental Environmental Impact Report for the Berths 97-109 [China Shipping] Container Terminal Project at 1, 8 (Sept. 18, 2015) (proposed project consists of continued operation of the China Shipping Container Terminal, Berths 97-109 under new or modified mitigation measures)(NOP).

With this project definition in mind, the normal baseline would be the physical conditions existing at the time the environmental review for the *original* project commenced; *not* the conditions at the time the Notice of Preparation for the *SDEIR* was published. Indeed, given that the (original) approved project and the revised project constitute a single project under CEQA, it is incorrect for the SDEIR to portray the 2014 baseline as the normal "existing conditions" baseline described in section 15125(a). SDEIR at 2-25. The Port's interpretation of "existing conditions" illegally piecemeals the revisions to the project from the project approved in 2008. *POET*, 12 Cal.App.5th at 103–04.

More importantly, determining the normal "existing conditions" baseline for the entire project requires an understanding of the China Shipping project's history. As acknowledged in the 2008 DEIR, the project illegally commenced in 2001 before proper environmental review was preformed, resulting in litigation and a settlement agreement (the ASJ). A court order required the Port to comply with CEQA and complete a project-specific EIR for the China Shipping project. The ASJ and the subsequent EIR set forth a "pre-project" baseline that promoted CEQA Guidelines section 15125(a), and recognized the unique context of the project. The DEIR states:

> The CEQA baseline employed in this [2008 DEIR] document is governed not only by the CEQA Guidelines [15125(a)], but also by the terms of the Amended Stipulated Judgment (ASJ) . . . Section VI(A)(2) of the ASJ provides that: "The baseline for consideration of impacts from the China Shipping Project shall be either zero or the baseline for Berths 97-109 prior to approval of the lease in March 2001."

DEIR at 2-53. The 2008 EIR went on to utilize a CEQA baseline year of April 2000–March 2001, which again, represented pre-project conditions, and was required by the ASJ. DEIR at 2-1; 2-54–2-59.[10]

[9] The 2008 EIR defines the China Shipping Container Terminal project as all three phases of terminal construction and development that are designed to optimize container terminal operations, along with a 40-year lease (2005–2045). Berths 97-109 [China Shipping] Container Terminal Project Final Environmental Impact Statement/Environmental Impact Report at 1-1; 1-2; 2-14 (FEIR).

[10] The SDEIR's NOP also signaled that the SDEIR would use a 2001 baseline. The NOP states that because the SEIR is to serve as a supplement to the previously certified 2008 FEIR, "impacts and conditions presented in the previous EIR will serve as the primary base of comparison for the analysis." NOP at 9. As noted, the 2008 FEIR used a 2001 baseline.

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Given the "project" currently under review, the ASJ, and the baseline adopted in the 2008 EIR for the same project, the SDEIR must employ a 2000–2001 baseline.[11]

C. The 2014 Baseline Hides Impacts

The purpose of the SDEIR is to provide the information and analysis necessary to make the previously certified EIR adequate for the project as revised. CEQA Guidelines §15163. Stated differently, because the Port failed to comply with all the mitigation measures it committed to in the 2008 EIR, a supplemental environmental document was required to substantiate the Port's newly-minted claims of infeasibility, and to ensure that the project's significant impacts are reported and mitigated to the greatest degree possible. The SDEIR's 2014 baseline undermines this purpose, and infects the entire EIR.

First, by relying on a 2014 baseline, the SDEIR omits a comparison of the project as revised with pre-project (2000–2001) conditions. The fundamental goal of an EIR is to inform decision makers and the public about the environmental consequences of a project. *Neighbors*, 57 Cal.4th at 505. Such an assessment requires "delineating the conditions prevailing absent the project." *Id*. This comparison is necessary to understand the project's *entire* effects, and for the Board of Harbor Commissioners to render the findings required under CEQA Guidelines 15091 for each significant effect shown in the previous EIR.[12]

Second, by using a 2014 baseline, the SDEIR avoids disclosing the excess emissions shouldered by the community due to the Port's failure to implement the mitigations at issue. There is no dispute that failing to implement all the mitigation measures embodied in the 2008 EIR resulted in more air pollution than if those measures were fulfilled. SDEIR at 1-31, 1-32. Most of these measures were set to phase in between 2004 and 2018.[13] An accounting of these emissions is required as a direct project effect (attributable to the "Revised Project"), and cannot be piecemealed from consideration by using a 2014 baseline. *See POET*, 12 Cal.App.5th at 73, 81.

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[11] Given the discretion afforded to agencies in selecting a baseline, we acknowledge that there may be a baseline year other than 2000–2001 that could be rationalized, including 2004, which represents the first year that mitigations under the 2008 EIR were to phase-in. But under no circumstances does a 2014 baseline serve CEQA's informational purpose.

[12] Figures 1, 2, 7–9 of the STI Report visually depict the difference in emissions levels between the 2014 Mitigated Baseline and 2000–2001 baseline level used in the FEIR. STI Technical Review of DSEIR, China Shipping Terminal Project (Sept. 2017) (Attachment I1).

[13] Measures to reduce operational emissions from yard equipment were set to phase in as early as 2004 (MMAQ-15 and MMAQ-17). Port of Los Angeles, China Shipping FEIR, Transmittal 4: Berth 97-109 [China Shipping] Container Terminal Project Mitigation Measures, *available at* https://www.portoflosangeles.org/EIR/ChinaShipping/FEIR/_Mitigation_List.pdf ("FEIR Mitigation Measures"). The last measure to phase in is MMAA-20, which requires 100% LNG trucks by 2018. Port of Los Angeles, FEIR, Berth 97-109 [China Shipping] Container Terminal Project, Mitigation Monitoring and Reporting Program, at 2-13–2-20, *available at* https://www.portoflosangeles.org/EIR/ChinaShipping/FEIR/MMRP.pdf ("FEIR Mitigation Monitoring and Reporting Program").

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Several charts in the SDEIR help illustrate the excess emissions that were excluded from consideration based on the SDEIR's baseline. For example, MMAQ 9 called for increased use of AMP starting from 2005 through 2011, with 100% of ships using AMP by 2011. SDEIR Table 14 of Appendix D, reproduced below, depicts the levels of compliance between 2005 and 2013, showing significant noncompliance *before* 2014.[14] Highlighted in red are the most egregious years of noncompliance.

Table 14. Evaluation of MM AQ-9.

MM AQ-9: Alternative Maritime Power		
Vessels must use AMP at specified fractions of vessel visits.		
Year	**Measure**	**Actual**[15]
2005	60%	95%
2005 July	70%	97%
2006	70%	46%
2007	70%	87%
2008	70%	87%
2009	70%	78%
2010	90%	72%
2011	100%	65%
2012	100%	12%
2013	100%	34%

MM AQ 10 required 100% of vessel visits in 2009 and thereafter to comply with the VSR requirement of 12 knots out to 40nm. Table 15 in Appendix D details compliance with this measure. Notice that in 2009, only 20% of ships complied with the 40 nm required, and between 2010 and 2012, compliance remained below 50%.

[14] Table 14 of SDEIR Appendix D incorrectly portrays the percentages of AMP required in 2011–2013 as 90%; the 2008 EIR required 100% of vessels to use AMP starting in 2011. It is unclear if this error affected Appendix D's conclusions. In any event, we have updated our reproduction of Table 14 to reflect the correct requirements.

[15] There is conflicting data on China Shipping's compliance with the AMP measure. For example, between 2005 and 2009 (except for 2006), Table 14 in Appendix D reports higher AMP compliance rates than Chapter 2 of the SDEIR. *Compare* SDEIR App. D at Table 14 *with* SDEIR at Table 2-1. The Port needs to resolve this inconsistency and determine how it affected its analysis.

Table 15. Evaluation of MM AQ-10.

MM AQ-10: Vessel Speed Reduction Program			
100% of vessel visits 2009 and thereafter must comply with VSRP requirement of 12 knots out to 40nm.			
Year	**Measure**	**Actual 20 nm**	**Actual 40 nm**
2009	100%	99%	20%
2010	100%	97%	42%
2011	100%	99%	41%
2012	100%	93%	47%
2013	100%	99%	89%

MMAQ-15 required, among other things, all yard tractors to run on alternative fuel (LPG) beginning September 10, 2004 until December 31, 2014. Table 17 from Appendix D below shows that only about 40% of the yard tractors complied with this measure between 2005–2007.

Table 17. Evaluation of MM AQ-15.

MM AQ-15: Yard Tractors at Berth 97-109 Terminal			
All yard tractors operated at the Berth 97-109 terminal shall run on alternative fuel (LPG)			
Year	**Measure**	**Actual**	**Remaining Diesel**
2005	100%	40%	DOC, Emulsified Diesel
2006	100%	42%	DOC, Emulsified Diesel
2007	100%	42%	DOC
2008	100%	100%	
2009	100%	100%	
2010	100%	100%	
2011	100%	100%	
2012	100%	100%	
2013	100%	100%	

MMAQ-20 required the phase in of LNG trucks. Appendix D Table 21, reproduced below, depicts the Port's meager compliance through 2013.

NRDC DSEIR-2

Table 21. Evaluation of MM AQ-20.

MM AQ-20: LNG Trucks		
Trucks must be LNG-fueled		
Year	**Measure**	**Actual**
2012	50%	10.0%
2013	50%	9.4%

Further, under NRDC's direction, Sonoma Technology, Inc. (STI) estimated the excess on-site truck emissions from the Port's failure to comply with the LNG truck measure in 2013, 2014, 2017, and 2018.[16] STI's analysis shows significant differences between the Approved and Revised measures in terms of on-site drayage truck NOx and PM emissions. STI Report, Figures 4 & 5; *see also* STI Report Figures 1, 2, 8–13 (charts depicting the years in which the SDEIR provides no information about the actual and/or projected excess emissions). This is just one example of how the SDEIR should have disclosed the Revised Project's changes on the environment, but did not.

The SDEIR was supposed to disclose how changes to the project are likely to affect the environment. Here, the changes to the project—in the form of increased emissions due to unfulfilled and unenforced mitigation measures—are excluded from the SDEIR simply because they proceeded 2014—a year that is not relevant to the definition of the project in this case.

Third, the 2014 Mitigated Baseline excludes the emissions benefits from full compliance with the LNG truck measure (MMAQ-20) and the yard tractor measure (MMAQ-15). Pursuant to the original LNG truck measure, heavy duty trucks entering the terminal were to be LNG fueled in the following percentages:

- 50% in 2012–2013
- 70% 2014–2017
- 100% in 2018 and thereafter

SDEIR at 2-4 (Table 2-1). Because the baseline is set at 2014, the emissions benefits that were supposed to be associated with this measure in 2015–2018, including 100% LNG trucks by 2018, are excluded from the baseline.

Beginning in 2015, all yard tractors were to be "the cleanest available NOx alternative-fueled engine meeting 0.015 gm/hp-hr for PM." SDEIR at 2-3 (Table 2-1). This mitigation requirement is also missing from the 2014 Mitigated Baseline because it didn't phase in until 2015.

While the full effect of these omissions is unclear, at a minimum, they result in an inaccurate portrayal of the differences between the "mitigated" baseline and the Revised Project. They also

[16] STI Technical Review of DSEIR, China Shipping Container Terminal Project (Sept. 2017) (Attachment I1).

undermine the informational value of a 2014 Mitigated Baseline that fails to include all the 2008 mitigation measures, and artfully excludes measures that would have resulted in significant reductions in NOx and PM emissions, and corresponding health impacts.

D. Examples of How Using a 2000–2001 Baseline Would Reveal Valuable Information

Using a 2000–2001 baseline would result in an SDEIR that includes (1) an environmental analysis that begins in 2000, and attributes all unmitigated impacts to the Revised Project (including impacts that occurred due to the Port's noncompliance); and (2) an emissions comparison of the Approved Project (with the 2008 mitigations timely in place) and the Revised Project (actual mitigation compliance levels and revised measures) during the years when the mitigation at issue was to be implemented but wasn't. The 2000–2001 baseline inventory and emission comparison scenarios described above could (and should) be generated using updated terminal activity levels, the latest emissions models, and updated OEHHA health risk guidance so that appropriate direct comparisons can be made.

More specifically, and by way of example, use of a 2000–2001 baseline could provide the following information that was not in the SDEIR:

- Full attribution of all the project's emissions to the Revised Project (by comparing pre-project conditions) so that the decision makers clearly understand the environmental consequences of the China Shipping terminal over the life of the project.

- An accounting of the excess emissions attributable to the Revised Project between, for example, 2004 and 2022. Currently, the SDEIR only compares the Approved and Revised Projects in 2014,[17] 2023, 2030, 2036 and 2045[18]—omitting the key period before 2014 and immediately after. The years between 2004 and 2022 are a critical time for analysis because this period includes the time when the approved mitigation measures were to kick in, and result in significant emissions benefits. For instance, the 2008 EIR forecast a 70% reduction in peak daily 2015 NOx emissions relative to the unmitigated scenario. *Compare* DEIR at Table 3.2-24 (NOx emissions without mitigation) *with id.* at Table 3.2-29 (NOx emissions with mitigation). [19]

[17] SDEIR Table 3.1-5 provides 2014 Unmitigated and Mitigated emissions. Based on the definition of these terms, SDEIR App. B at B1-4, subtracting these two scenarios results in the "excess emissions" for 2014.

[18] It appears that one can estimate excess emissions in future years by comparing Table 3.1-8 and Table 3.1-9, and subtracting emissions under the Revised Project scenarios from the FEIR Mitigated Scenario, which represents peak daily operational emissions assuming all 2008 EIR mitigations were fully and timely implemented, and increases in terminal throughput as shown in Table 2-3. SDEIR at Table 3.1-8, Table 3.1-9, and 3.1-47–3.1-48.

[19] The fact that the Port has performed the emissions comparisons for 2014 and some of the relevant future years with actual activity data and the latest models shows that the Port can run the requisite analysis in other years (e.g., pre-2014) but simply chose not to.

Relatedly, we believe that between 2004 and 2022, the excess emissions from the Port's noncompliance may have exceeded CEQA significance thresholds for multiple years and for multiple pollutants. The SDEIR indicates that the Port's noncompliance resulted in 0.6 tons of excess peak daily NOx emissions in 2014, which is equal to about 1200 lbs. of NOx, and well above the significance threshold for action (only 55 lbs. NOx). SDEIR at Table 3.1-5; Table 3.1-6. Because the SDEIR employs a 2014 baseline, and focuses its air quality analysis on 2023–2045, the SDEIR does not identify possible exceedances before or shortly after 2014; but as noted, they did occur in 2014.

Exceedances may be more likely to occur in the 2004 to 2022 timeframe because after that time, fleets are expected to be cleaner in response to regulations, regardless of mitigation measures adopted for the project.[20] Stated differently, by focusing the SDEIR's air quality analysis on the Revised Project's emissions in 2023–2045, the Revised Project benefits from a cleaner fleet mix due to regulatory efforts. SDEIR App. B1 at B1-4 (defining Revised Project emissions scenarios as including future regulations). As a result, the Revised Project in 2023–2045 looks much cleaner than the 2014 baseline years, and appears comparable to the Approved Project in future years—not because the Revised Project includes extensive mitigation—but because regulations will decrease emissions across the board. If the air quality analysis disclosed emissions in 2004–2022, we would expect to see more years when operational emissions exceed significance thresholds, like they did in 2014. SDEIR Table 3.1-5, Table 3.1-6.

- A more honest assessment of health risks created by the project. The SDEIR analyzes health risks based on specific long-term exposure periods. SDEIR at B3-22 ("the cancer risk exposure periods were 30 years for residential and sensitive receptors, 25 years for occupational receptors, and 70 years for population cancer burden."). The SDEIR assumed the initial year of each project exposure period was 2015, the first year after the 2014 baseline year. *E.g.*, *id.* at 3.1-32, 3.1-33 (describing exposure periods as 2015–2044, 2015–2039, and 2015–2084 for determining health risks). These exposure periods fail to include the excess emissions attributable to the Revised Project *before* 2014. An exposure period starting in, for example, 2001 would more accurately portray, what are likely to be, higher health risks generated by the project—prompting greater mitigation. [21]

[20] SDEIR at 3.1-44–45 (describing how regulatory requirements decrease emissions factors from most project sources between 2030 and 2045); *see also* CARB, Mobile Source Strategy (May 2016) at 22 ("existing ARB and district control programs are projected to reduce NOx emissions by over 50 percent between 2015 and 2031"), 32–36; STI Report at 9 (explaining how emissions models assume a large drop in vehicle emissions starting in 2023 due to state and federal regulations) (Attachment I1).

[21] While Appendix D may provide some comparisons between pre-project conditions and the Revised Project comparisons between 2005 and 2013 by comparing the "performance review" to the 2008 EIR CEQA baseline (2001), these comparisons are limited. They are only provided for 3 years (2005, 2010, and 2013). SDEIR App. D at 4–9. Comparisons are needed for the life of the project so that decision makers can understand the project's full consequences over its lifespan (the proposed lease extends to 2045). Additionally, Appendix D was not based on

E. The SDEIR Fails to Provide an Adequate Justification for Using a 2014 Baseline

NRDC DSEIR-2

As acknowledged above, an agency has the discretion to use a baseline other than the norm established by CEQA Guidelines section 15125(a) if a justification is provided and supported by substantial evidence. The Port's justifications do not meet this standard.

The Port's rationale for using a 2014 baseline rests on the fact that air quality modeling techniques have been updated since the 2008 EIR. Chapter 2 of the SDEIR at 2-24, states:

> Changes in analytical and modelling techniques, as discussed in Sections 2.2.3 and 3.1, and Appendix B1, since 2008 for other impact analyses have made it unworkable or confusing to analyze impacts in this SEIR using a baseline drawn from data in the 2008 EIS/EIR. For these impacts areas, it was necessary to determine a different approach for evaluating the impacts of the Revised Project and to disclose the incremental change in environmental impacts between the Approved Project and the Revised Project. LAHD as determined that the most informative and appropriate approach is to adopt an alternative baseline for these analyses that represents existing conditions (2014) with full implementation of the 2008 Approved Project."

Similarly, in Chapter 3.1, the SDEIR at 3.1-3, states:

> Due to improvements in procedures and assumptions used to calculate emissions and in atmospheric dispersion modeling procedures used to estimate resulting pollutant concentrations and consequent health impacts (which together constitute the air quality impacts of the project), it is not possible to directly compare air quality impacts presented in the 2008 EIS/EIR for the Approved Project with impacts calculated for this Draft SEIR for the Revised Project, nor is it possible to reproduce the outdated methods, models, and procedures used to analyze air quality impacts in the 2008 EIS/EIR. Therefore, this Draft SEIR presents an evaluation of the air quality impacts for all of the baseline and future conditions scenarios described in the preceding paragraph using current, state-of-the-art emissions estimation, air quality modeling, and health risk procedures, including the 2015 OEHHA HRA Guidelines.

This "justification" may explain why the SDEIR may not rely on outdated projections and baseline scenarios in the 2008 EIR. It does not, however, explain why the SDEIR did not recreate the 2000–2001 baseline with updated methods and models, and compare pre-project conditions with the Revised Project so that the public and decisionmakers understand the environmental cost of the Revised Project. Nor does it explain why the SDEIR did not compare Approved Project and Revised Project scenarios based on updated activity and emissions data for

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updated emissions factors or dispersion modeling (or presumably updated health risk guidance), SDEIR App. D at 1, 2, 13, 15, and thus, is not an accurate predictor of the Revised Project's emissions or health risks. And as discussed in greater detail below, Appendix D fails to provide an apples to apples comparison between the Revised and Approved Projects based on updated activity data, air quality modeling, or health risk guidance for any years.

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the years between for example, 2004 and 2018 when the unfulfilled mitigation measures were to go into effect, and include this analysis as part of the Revised Project's incremental impacts.

Nor does the SDEIR contend that using a 2000–2001 baseline based on updated models would be misleading (especially if emissions comparisons of the Approved and Revised Project over the life of the project are provided), or that using a 2014 baseline will enhance public participation and more informed decisionmaking. *See Poet*, 12 Cal.App.5th at 80; *Neighbors*, 57 Cal.4th at 453. As detailed above, the 2014 baseline severs past, current, and near-term impacts from the project in violation of CEQA, and provides illusory conditions to compare the Revised Project against (conditions where some but not even all the mitigation measures are assumed to be in effect, *supra* at 11). It is not clear what, if any, informational value a 2014 baseline serves.

The SDEIR's baseline infects the Port's assessment of the Revised Project's operational emissions, offsite ambient air pollutant concentrations, assessment of mortality and morbidity from PM2.5, and toxic air contaminant exposure, as well as the Revised Project's contribution to cumulative air quality impacts. SDEIR at 3.1-39–65; 4-1317. Absent a full accounting of the emissions attributable to the Revised Project, the SDEIR fails to accurately predict the nature and severity of the Revised Project's air quality impacts, and the difference between the Approved and Revised Projects. In short, a 2014 baseline fails to give the public and decision makers "the most accurate picture practically possible of the project's likely impacts," and is contrary to CEQA's informational purpose. *See POET*, 12 Cal.App.5th at 79.

The Port must revise the SDEIR and adopt a 2000–2001 baseline.

II. THE SDEIR'S AIR QUALTIY ANALYSIS FAILS TO PROVIDE ENOUGH ACCURATE, RELEVANT, COMPREHENSIBLE INFORMATION TO PERMIT INFORMED DECISONMAKING AND PUBLIC PARTICIPATION

NRDC DSEIR-3

Port pollution creates a triple threat for the health of local communities. First, diesel emissions from port operations are toxic and significantly harm communities closest to the source of pollution. Second, the combustion of fossil fuels by port-serving vehicles and equipment emit large quantities of NOx pollution, which contributes to regional air pollution problems like ozone and fine particulate matter. Finally, freight transportation generates greenhouse gas emissions, which are expected to increase as the ports grow.

This "triple threat" disproportionately impacts low-income communities and communities of color that often live in close proximity to freeways, ports, railyards, and other facilities that generate significant levels of localized diesel exhaust.[22] As a result, these same communities experience higher asthma rates and other illnesses.[23] Emissions from the China Shipping terminal contribute to these impacts.

[22] Arlene Rosenbaum et al., Analysis of Diesel Particulate Matter Health Risk Disparities in Selected US Harbor Areas, AM. J. PUB. HEALTH S217, S221 (2011) (Attachment F5).
[23] *See, e.g.*, San Pedro Bay Ports, Draft Final Clean Air Action Plan 2017 at 19 (July 2017), *available at* http://www.cleanairactionplan.org/documents/clean-air-action-plan-2017-draft-

NRDC DSEIR-3

The SDEIR shows that there were significant NOx emissions caused by the Port's failure to enforce the 2008 EIR mitigation measures—emissions that the Port ignores in analyzing future mitigation measures. But the document is grossly inadequate to provide the reader a clear picture of how big those past emissions were. Moreover, its future projections are dense, hard to follow and full of technical errors. In sum, the document fails its basic purpose to inform the public and decisionmakers of the environmental consequences of the proposed actions.

A primary purpose of CEQA is to: "[i]nform government decisionmakers and the public about the potential, significant environmental effects of proposed activities." Cal. Code Regs., tit. 14, § 15002, subd. (a)(1); *Pesticide Action Ctr. N. America v. Cal. Dept. of Pesticide Regulation*, No. A145632, 2017 WL 4130466 (Sept. 19, 2017). "If an EIR fails to include relevant information and precludes informed decisionmaking and public participation, the goals of CEQA are thwarted and a prejudicial abuse of discretion has occurred." *Save Our Peninsula Committee v. Monterey Cnty. Brd. of Supervisors*, 87 Cal.App.4th 99, 128 (2001). The SDEIR fails these tests both retrospectively and prospectively.

NRDC DSEIR-4

A. The Project's Past Emissions Are Under-Reported and Must Be Mitigated

The SDEIR shows that approximately 1200 pounds of excess peak daily NOx emissions occurred in 2014—emissions that would not have occurred had all the ASJ and 2008 mitigation measures been implemented. *See* STI Report at 2, SDEIR at Table 3.1-5. This figure is nearly 22 times higher than the SCAQMD threshold of significance.[24] Excess emissions of PM2.5, PM10, and VOCs also occurred. But, while we can assume that there were excess emissions throughout the 2004–2014 time period (and later), nowhere in the SDEIR is there a quantification of the volume of these emissions except possibly in 2023 through 2045.[25]

We define "excess emissions" as emissions that would not have occurred if the 2008 mitigations had been timely implemented. Appendix D appears[26] to view excess emissions (although it does not use that term), as emissions above those predicted in the 2008 EIR. Even under that latter definition, Appendix D—with all its faults—reveals that in 2013, there were higher levels of SOx than predicted in the 2008 EIR. SDEIR App. D at 8 (Table 6).

In that year, peak daily operational SOx emissions were 320 lbs. per day higher than projected in the 2008 EIR. *Id.* at 9 (Table 7). This level is more than double the significance threshold of 150

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document-final.pdf (Draft CAAP Update 2017)(Attachment C3); California Cleaner Freight Coalition, Vision for a Sustainable Freight System in California, at 11–14, *available at* https://www.ccair.org/wp-content/uploads/2016/01/CCFC-Vision-for-a-Sustainable-Freight-System-in-California.pdf (Attachment F6); South Coast Air Quality Management District, Final Report: Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-IV) (May 2015), *available at* http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf?sfvrsn=7 (Attachment E14).

[24] The significance threshold for NOx is 55 pounds/day. *See* SDEIR at Table 3.1-6.

[25] Tables 3.1-8 and 3.1-9 may give information for those years, although that is less than clear.

[26] We emailed Port staff and asked for an explanation of what Appendix D Tables 2, 4, and 6 were meant to show, but received no explanation.

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lbs. per day. *Id.* at 8 (Table 6). Accordingly, the SDEIR's own data reveals significant SOx emissions in 2013, but because the air quality analysis omits this year from its review, these impacts are not studied.

This is important because, as in the *POET* case, past emissions that occurred in violation of CEQA must be mitigated prospectively. In *POET*, the Court of Appeal found that the California Air Resources Board (CARB) had failed to account for or mitigate past NOx emissions associated with the increased use of biofuel, and sent the regulatory program there at issue back to CARB for further analysis, including future mitigations measures to account for the past excess NOx emissions. The China Shipping matter is directly analogous. This means that the SDEIR must contain an accurate and understandable calculation of the emissions, especially of NOx and PM, that occurred because the Port allowed, and sometimes fostered, non-compliance with eleven of the mitigation measures in the 2008 EIR, and must contain future mitigation measures to make up for those past emissions. But, aside from giving us a figure for 2014, it does not provide that needed information, and so violates CEQA.[27]

B. The SDEIR's Calculations of Future Emissions Are Inaccurate and Unreliable

NRDC DSEIR-5

The STI report identifies a list of mistakes in the SDEIR, so many that the SDEIR is essentially worthless. A redraft is needed to fix the technical issues described below and in the STI report, and a full, comprehensible emissions inventory beginning in 2000–2001 and continuing through 2050 (for GHG compliance purposes). The methodological errors in the SDEIR include the following:

1. Modeling Issues

Different, updated modeling programs were used for the 2017 SDEIR than for the 2008 EIR, making accurate comparisons problematic.[28] To compound this, in the "Performance Review" section of the SDEIR, Appendix D, updated modeling was not used although Appendix D purports to show differences among different mitigation scenarios.[29] To have "apples to apples" comparisons that make sense, the same modeling protocols should be used, as the SDEIR does, in Appendix D, with differences resulting from use of updated protocols pointed out where appropriate. Ideally, and to best promote the informational value of the document, we recommend that air quality impacts presented in the SDEIR reflect the use of current emissions models and protocols, and health risk guidance.

In addition, serious problems with underestimation of NOx emissions in EMFAC's treatment of port drayage emissions are identified in the STI report at footnotes 6 and 7, page 9. In summary, EMFAC substantially underestimates NOx emissions in the drayage duty cycle by a factor of 5 or more due to mistaken reliance on manufacturer testing that does not replicate real-world

[27] As noted above, use of a 2000–2001 baseline would provide the framework for quantifying excess emissions before 2014; a 2014 baseline precludes it.
[28] For example, EMFAC 2007 was used in the 2008 EIR and EMFAC 2014 in the 2017 SDEIR.
[29] SDEIR App. D at 1.

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conditions. This makes the SDEIR's future projections, as well as past inventories, highly suspect.

2. NOx and PM Emission Factors for Heavy Duty Trucks

NRDC DSEIR-6

These factors used in the SDEIR are contrary to published literature[30] and not properly justified, making the future truck emission projections unreliable. The SDEIR sets emission factors for diesel trucks equal to LNG trucks, which is factually incorrect, and moreover claims that emission factors for heavy-duty trucks will increase from 2023 to 2045 whereas in reality they are expected to decrease. This muddies the waters both with respect to an LNG versus diesel emissions comparison, and the expected future emissions from the Revised Project.

3. Future Emissions Benefits from AMP

NRDC DSEIR-7

These benefits are not consistently represented. The SDEIR projects future peak day emissions of NOx and PM associated with use of AMP to be roughly the same under both scenarios studied, but the average emissions are substantially different between the scenarios.[31] This makes no sense.

4. Cargo Handling Equipment Measures

NRDC DSEIR-8

The 2008 EIR itself is inconsistent in its analysis of cargo handling equipment mitigation measures, and this inconsistency carries over to the SDEIR. The 2008 EIR projections for 2010 show cargo handling equipment emissions for the mitigated scenario greater than those in the unmitigated scenario.[32] This violates common sense and infects the SDEIR's cargo handling equipment analysis as well.

C. Appendix D Does Not Tell Us What We Need to Know

NRDC DSEIR-9

SDEIR Appendix D is a curious document. Barely intelligible, it is apparently designed to show that historic emissions at China Shipping were lower than predicted in the 2008 EIR, so everyone should be happy.

But what is more significant is what Appendix D does not show: the difference between what actually happened at China Shipping and what should have happened given actual throughput and application of all 52 mitigation measures in the 2008 EIR. Under the analysis of the *POET* case described above, that calculation is critical to a full CEQA analysis, but is missing here. Below we explain why.

Here is what we think the authors of Appendix D did. As noted above, we asked for clarification of the methodology but none was given, and so what follows is our best guess. Take Table 4 for example, at Appendix D page 4. The left-hand column appears to present emissions data based on actual throughput with the mitigation measures actually in place—using the same emissions

[30] STI Report at 9, note 5 (Attachment I1).
[31] STI Report at 12–15, Figures 7–10.
[32] STI Report at 16, 17, Figures 11–12.

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models used in the 2008 EIR.[33] The right-hand column appears to present the estimated emissions for that same year, using a 2001 baseline and then-projected (not real) throughput numbers, assumes timely implementation of the fifty-two 2008 mitigation measures, and appears to be cut and pasted from Table 3.2-20 in the 2008 EIR. The data in both columns do not reflect updated emissions modeling. Not surprisingly, given the drop in throughput compared to the 2008 EIR projections, the numbers in the left-hand column are lower than those in the right-hand column. This is why the Port suggests that everyone should be happy.

But—what is missing is a comparison of the 2010 actual figures with what should have happened in 2010 given real (not projected) throughput and all 52 required mitigation measures with updated modeling. Those numbers are what the local community had the legal right to expect and to insist on, and what *POET* requires the Port to disclose. But they are not present, nor are they present for 2005 and 2013, the other years charted in Appendix D. If they were, the numbers in the left-hand column would be higher than those in the right-hand column, and the difference would be the amount of excess emissions that *POET* requires the Port to calculate and mitigate.

D. The SDEIR Fails to Analyze Whether the Revised Project Will Conflict with or Obstruct Implementation of the 2016 AQMP

NRDC DSEIR-10

The South Coast air basin is classified under the federal Clean Air Act as in "extreme non-attainment" for ozone, better known to residents of the area as smog.[34] The main precursors of ozone in the lower atmosphere are NOx and VOCs. In its 2016 Air Quality Management Plan (AQMP), the South Coast Air Quality Management District (AQMD) attempts to demonstrate to the US Environmental Protection Agency (US EPA) how it intends to come into compliance by 2023, focusing on enormous reductions in NOx emissions in the region:

> The most significant air quality challenge in the Basin is to reduce nitrogen oxide (NOx) emissions sufficiently to meet the upcoming ozone standard deadlines. Based on the inventory and modeling results, 522 tons per day (tpd) of total Basin NOx 2012 emissions are projected to drop to 255 tpd and 214 tpd in the 8-hour ozone attainment years of 2023 and 2031 respectively, due to continued implementation of already adopted regulatory actions ("baseline emissions"). The analysis suggests that total Basin emissions of NOx must be reduced to approximately 141 tpd in 2023 and 96 tpd in 2031 to attain the 8-hour ozone

[33] *See* Appendix D, page 2, section 1.2 for what appears to be an explanation of this methodology.

[34] South Coast Air Quality Management District, 2016 Air Quality Management Plan, Executive Summary, *available at* http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/executive-summary.pdf?sfvrsn=4 (Attachment E12). This is with reference to the 75 ppb federal NAAQS, which has since been lowered to 70 ppb.

> standards. This represents an additional 45 percent reduction in NOx in 2023, and an additional 55 percent NOx reduction beyond 2031 levels.[35]

This is an enormous challenge. The AQMP relies heavily on reducing NOx emissions from the main sources of NOx in the area: mobile sources, mostly heavy-duty trucks, that cause 88% of the NOx emissions regionally.[36] Given the projected increase in port throughput estimated in the SDEIR, even with lower-NOx 2010 EPA certified diesel engines, the Port is not and will not be doing its fair share to help AQMD achieve the NOx reductions that it needs. For this reason, CARB and the South Coast AQMD are now considering implementing indirect source rules under the federal Clean Air Act that might force the Port to reduce or at least limit NOx emissions; not surprisingly, the Port opposes these measures.

The City of Los Angeles CEQA threshold guidelines require a CEQA document to examine nine possible air quality impacts, among which (AQ-8) whether the project would conflict or obstruct implementation of an applicable AQMP. In the SDEIR and the NOP for the China Shipping project, the Port disclaims a need for analysis of compliance with the 2016 AQMP, stating:

> Less Than Significant Impact. The FEIR concluded that construction and operation of the CS Container Terminal would not conflict with implementation of the 2003 AQMP (the then-current version) because the Port regularly provides SCAG with its Port-wide cargo forecasts for development of the AQMP. Therefore, the attainment demonstrations included in the 2003 AQMP accounted for the emissions generated by projected future growth at the Port. The FEIR further concluded that the attainment strategies in these plans include mobile source control measures and clean fuel programs that are enforced at the state and federal levels on engine manufacturers and petroleum refiners and retailers, and, as a result, operation of the CS Container Terminal would comply with these control measures. The South Coast Air Quality Management District (SCAQMD) also adopts AQMP control measures into the SCAQMD rules and regulations, which are then used to regulate sources of air pollution in the South Coast Air Basin. Therefore, compliance with these requirements would ensure that the proposed Project would not conflict with or obstruct implementation of the AQMP. These conclusions remain valid and this impact will not be addressed in the Supplemental EIR.[37]

This is incorrect for two reasons. First, it relies on the 2003 AQMP and ignores the 2016 AQMP, which is based on current conditions. Second, the SDEIR's proposed drayage plan—doing nothing—will lead to increased NOx emissions over what the LNG mitigation measure would have created and over what zero emission drayage trucks will create, and so contemplates increases in NOx while the AQMP needs a huge decrease in NOx. Indeed, as noted above, the SDEIR reveals that at least in 2014, there will be substantial increases in NOx from the Revised Project versus Approved Project conditions. That fact, in connection with an honest accounting of excess emissions in

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[35] *Id.* at ES-2.
[36] *Id.* at ES-7; *see also id.* at 4-7 and Fig. 4-1.
[37] NOP at 12–13.

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other near-term years, should be disclosed to the public and its significance analyzed in the SDEIR. The Port should not be allowed to hide from the public the contribution of the operation of the China Shipping terminal to the Southern California smog problem.

E. The SDEIR Fails to Assess Noncompliance with MMAQ-18 (DPFs for Locomotives)

The SDEIR appears to have excluded from analysis the Port's failure to timely implement MMAQ-18, which states "[b]eginning January 1, 2015, all yard locomotives at the Berth 121-131 Rail Yard that handle containers moving through the Berth 97-109 terminal shall be equipped with a diesel particulate filter (DPF)." FEIR at 3-52.

The main body of the SDEIR implies that the Port complied with this measure by excluding it from the list of measures that were not implemented. SDEIR at 2-3 (Table 2-1). However, Appendix D, which also assessed compliance with the 2008 mitigations states:

> There have been no DPF retrofits of yard locomotives. It is anticipated that newly manufactured locomotives beginning in 2016 and meeting Tier 4 locomotive emissions standards, will have DPF technology included as part of the original equipment manufacturers (OEM) design.

SDEIR App. D at 21; *id*. at 17–18 (explaining that for each mitigation measure, Appendix D compared the requirements of each measure by calendar year with the actual inventory data where possible).

NRDC DSEIR-11

If MMAQ-18 was not timely implemented, the SDEIR must be revised and recirculated to include a legitimate reason explaining the Port's noncompliance. *Napa Citizens For Honest Gov't v. Napa Cnty. Bd. of Supervisors*, 91 Cal.App.4th 342, 359 (Cal.Ct.App. 2001). Further, any noncompliance results in a project revision that was not analyzed in the SDEIR. The Port must address this error.

More fundamentally, this discrepancy calls into question whether there are other mitigation measures the Port did not timely implement. A subsequent study for this project should detail compliance with all 52 measures.

F. The SDEIR is Not Comprehensible to the Public or to Non-expert Decisionmakers

NRDC DSEIR-12

Over and above the technical and modeling errors described above, the SDEIR, and particularly Appendix D, are incomprehensible except perhaps to its authors. It is very difficult to understand how the document gets from A to B, especially in comparing past and future emission scenarios. We challenge a lay reader to study the tables in Section 3.1 and in Appendix D and describe simply what they mean and why. Techno-speak simply does not cut it for CEQA purposes, and so for that reason alone the documents must be redone.

III. THE SDEIR FAILS TO OVERCOME THE PRESUMPTION THAT THE 2008 MITIGATIONS ARE FEASIBLE, AND FAILS TO SET FORTH ALL FEASIBLE MEASURES TO REDUCE SIGNIFICANT OPERATIONAL EMISSIONS

Of the 52 mitigation measures adopted in the 2008 EIR, ten mitigation measures and one lease measure have not been fully implemented. SDEIR at 2-3 (Table 2-1). Of the unimplemented measures, 7 apply to operational emissions. The SDEIR seeks to modify or eliminate these air quality measures.

Under CEQA, a lead agency may not approve a project that will have significant environmental impacts unless it finds that alternatives and mitigation measures to reduce environmental impacts are infeasible based on specific economic, legal, social, technological or other considerations. Cal. Pub. Res. Code §§ 21002; 21061.1. "'Feasible' means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors." *Id.* § 21061.1.

An agency may delete or modify a mitigation measure after an initial EIR is certified, but must state a legitimate reason for deleting the mitigation measure, supported by substantial evidence. *Napa Citizens*, 91 Cal.App.4th at 359. Courts will temper deference to agency decisions to delete a mitigation measure with the presumption that the mitigation measure was adopted only after "due investigation and consideration" in the initial environmental review process. *Id.* "The fact that a mitigation measure had been adopted in an earlier plan, but has been deleted, will be relevant to the question of the adequacy of the modified EIR, because it identifies a mitigation measure that the modified EIR then must address." *Id.* A mitigation measure "cannot be deleted without a showing that it is infeasible." *Id.* Finally, "the deletion of an earlier adopted measure should be considered in reviewing any conclusion that the benefits of a project outweigh its unmitigated impact on the environment." *Id.*[38] The SDEIR fails to overcome this presumption.

Our comments in this section (Section III) and the next (Section IV) are organized as follows: First we provide a summary of the factual record that undercuts the SDEIR's claims that the 2008 mitigation measures are not feasible. Second, we highlight text in the SDEIR, which seems to confirm that the 2008 mitigations are in fact feasible. Third, we explain how each of the original mitigations are feasible, and can be strengthened, as well as provide specific comments on the revised measures. Finally, we list additional measures the Port should consider in the SDEIR to mitigate the project's significant operational emissions.

[38] *Napa Citizens* was decided in the context of a land use plan, and has since been applied to all CEQA projects. *See Lincoln Place Tenants Ass'n v. City of L.A.*, 130 Cal.App.4th 1491, 1509 (Cal.Ct.App. 2005); *see also Katzeff v. Cal. Dep't of Forestry and Fire Prot.*, 181 Cal.App.4th 601, 614 (Cal.Ct.App. 2010).

NRDC DSEIR-14

A. The Port's Infeasibility Arguments are a Litigation Artifact and Not Supported by the Record

Correspondence obtained through Public Records Act requests shows a frustrated Port and City Attorney disbelieving China Shipping's unsupported assertions that the 2008 mitigation measures were infeasible and demanding specifics, without success.

On February 17, 2015, the City Attorney wrote to counsel for China Shipping summarizing years of negotiations and specifically stating that China Shipping was "required to immediately implement" the mitigation measures identified in the 2008 EIR.[39] The City Attorney's letter contained a blunt threat:

> In the event a third party files a legal action challenging China Shipping's failure to comply with the mitigation measures, there is a strong possibility that the court will issue an order enjoining or otherwise affecting China Shipping's operations. Under California law, a court has broad authority to stop activities that it determines are against the law, are detrimental to the environment or violate a court order. These remedies are separate from and are not related to any rights or agreements between the Port and China Shipping. *The Court can issue any of these orders, including the complete shut-down of all activities at the site, without regard to the provisions of the Permit No. 999.* [Emphasis added]

On February 25, 2015, China Shipping replied and claimed it was fully compliant with the mitigation measures for ships, including the AMP and VSR measures. The letter went on to provide brief unsupported assertions that "immediate" replacement of certain cargo handling equipment was not economically feasible "at this time," and generally asserted that the LNG truck measure was not economically feasible.[40]

On March 3, 2015, the City Attorney replied to the China Shipping letter[41] and pointed out that the claim of infeasibility was late in the game:

> On the overall issue of economic infeasibility, China Shipping had the opportunity to present comments and evidence of economic infeasibility of these [mitigation] measures during the environmental review process, but chose not to do so.

Nonetheless the City Attorney invited China Shipping (again) to provide information regarding infeasibility on economic grounds or otherwise if circumstances had changed. On March 25, 2015, China Shipping replied, again, with few specifics.[42] Perhaps tiring of this, on April 16,

[39] Attachment A30.
[40] Attachment A31.
[41] Attachment A32.
[42] Attachment A33.

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2015,[43] June 12, 2015,[44] and October 19, 2016,[45] the City Attorney and Port wrote to China Shipping asking for more information.

On December 30, 2016, China Shipping wrote to the City Attorney and claimed that it needed more time to respond.[46] By that point, the September 18, 2015 NOP in this matter had been on the street for over a year. On January 17, 2017, the Port Executive Director Eugene Seroka again wrote to China Shipping[47] stating that:

> With respect to the SEIR, POLA has made several requests for data and information from China Shipping to assist POLA in preparation of the SEIR. To date, POLA has received only partial responses from China Shipping . . . China Shipping has not proposed any modifications to make currently required mitigation measures feasible nor provided alternative measures that could address the identified environmental impacts. This response is not satisfactory.

Mr. Seroka went on to say that the Port was proposing certain changes to the mitigation measures for analysis in the SEIR, and that:

> [I]t is incumbent on China Shipping, as the tenant, to comment on the feasibility of the measures proposed. Failure to do so is solely the responsibility of China Shipping.

On January 25, 2017, China Shipping responded that it would address the SEIR and environmental matters "in the near future."[48] No documents after that date were produced in response to our Public Records Act requests for documents relating to the China Shipping mitigation measures, and so we must assume that China Shipping never provided Mr. Seroka with additional information demonstrating potential infeasibility. China Shipping also did not appear to have commented on the NOP for the SDEIR.[49]

These facts show a lack of substantial evidence demonstrating infeasibility, and cast the SDEIR as an attempt to rationalize the Port and China Shipping's noncompliance.

Below, in sections B though F, we further document how the 2008 mitigation measures are in fact, feasible.

[43] Attachment A35.
[44] Attachment A62.
[45] Attachment A67 (POLA001634–35).
[46] Attachment A63 (POLA001471–74).
[47] Attachment A63 at POLA001475–81.
[48] Attachment A65 at POLA001587.
[49] SDEIR at Table 1-3 ("Summary of Key NOP Comments").

NRDC DSEIR-15

B. The SDEIR Concedes that the 2008 Mitigations are Feasible by Stating that if the Revised Project is Rejected, the Original 2008 Mitigations will be Enforced

When explaining the discretionary decision before the BHC, the SDEIR states:

> With respect to air quality, *if the Board does not approve the Revised Project, the CS Container Terminal could remain in operation under the original mitigation measures for air quality and greenhouse gas emissions.* As analyzed in the 2008 EIS/EIR, the impacts remaining after implementation of the previously approved mitigation measures would be less severe than the impacts of the Revised Project. Thus, allowing the previously approved measures to remain in place would avoid an incremental increase un the severity of impacts caused by the proposed changes. **. . .** Consequently**,** *if the Board does not approve the Revised Project, the environmental impacts determined in the 2008 EIS/EIR for the CS Container Terminal would still remain and the previously approved mitigation measures would still be required*.

SDEIR at 1-31 to 1-32 (emphasis added). The SDEIR goes on to state that if the Board rejects the Revised Project, the Port would be responsible for enforcing the previously adopted measures, and could pursue a separate proceeding against China Shipping to enforce them. SDEIR at 1-32. Such statements run counter to the SDEIR's position that the unfulfilled measures adopted in 2008 are infeasible. Either the measures are infeasible, and cannot be implemented or enforced; or the measures are feasible and the Board of Harbor Commissioners can move forward with the Project as envisioned in 2008 by implementing and enforcing all 52 mitigation measures certified in the China Shipping EIR.[50]

C. The 2008 AMP Measure (MM AQ-9) is Feasible

NRDC DSEIR-16

The SDEIR does not overcome the presumption that the 2008 EIR's AMP measure (MM AQ-9) is feasible, and thus goes backwards for no legally valid reason. **The Port should maintain a 100% compliance rate with the Port's AMP requirement as envisioned in the 2008 EIR, and if necessary, allow vessel operators to comply with an alternative emissions control system.**

In the 2008 FEIR, MM AQ-9 required that China Shipping ships calling at Berths 97-109 use AMP in the following percentages while hoteling in the Port.

- Jan–Jun 2005: 60%
- July 2005: 70%
- Jan 2010: 90%
- Jan 2011: 100%.

[50] We understand that if the 2008 measures are deemed substantively feasible (e.g., 100% ships can use AMP and comply with VSR), some of the deadlines for the measures have past, and would still need to be re-set.

NRDC DSEIR-16

MM AQ-9 also required that by 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at a 100 percent compliance rate, except for circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship.[51]

The SDEIR's revised measure reduces the percentage of vessel calls that must comply with AMP to 95%, and provides that if one or more of several exceptions exist, vessel operators can utilize an equivalent alternative at-berth emissions control caption system if feasible in lieu of AMP. SDEIR at 2-13.

None of the reasons cited in the SDEIR overcome the presumption that a 100% compliance rate with AMP is feasible (we acknowledge, of course that the deadline for that compliance—2011—is no longer feasible). The explanation provided is not based on data from China Shipping or its successors that the 100% AMP requirement is infeasible for its vessel operations, and instead appears to be speculative, generalized, and provided by the Port.

As discussed above, the Port privately granted waivers to China Shipping from the Project's AMP requirements (MM-AQ 9)—including when it served its financial interests to do so,[52] never secured an amended lease with China Shipping that included the 2008 mitigation measures, SDEIR at 1-8, and took no action against China Shipping to enforce the mitigation measures even as deadlines came and went. It appears that measures like MMAQ-9 became "infeasible" due to the own Port's failure to timely implement and enforce them, not due to any economic, legal, social, or technological reasons. *See* CEQA Guidelines § 15091.

NRDC DSEIR-17

Further, the SDEIR's claim that the 100% AMP requirement should be relaxed to 95% is contrary to other port projects. For example, Middle Harbor at the Port of Long Beach has had a 100% AMP requirement since December 2014.[53] And 100% of vessel calls at the Port's Trapac terminal are set to use AMP starting January 2018, per the certified Final EIR/EIS for that

[51] FEIR Mitigation Monitoring and Reporting Program at 2-13.

[52] *See supra* note 3 (citing 5 waivers). One of the waivers was granted after China Shipping told the Port in late November 2011, that it entered a deal that would shift 800 TEUs weekly from Long Beach to Los Angeles, and to meet the volume increase, it would need to use larger vessels that were not AMP-equipped (the smaller vessels China Shipping was using at the time were AMP-equipped). The Port granted China Shipping a waiver from the AMP requirement about two weeks later. Email from Z. Bing to K. McDermott (Nov. 25, 2011) (Attachment A69 (POLA001727)); Email from K. McDermott to Z. Bing (Dec. 12, 2011) (Attachment A69 (POLA001742)).

[53] Middle Harbor FEIR at ES-32 (Table ES 8-1) (April 2009) (Attachment C12) ("Mitigation Measure AQ-5: Shore-to-Ship Power ("Cold Ironing"). All OGV that call at the Middle Harbor container terminal shall utilize shore-to-ship power while at berth according to the following schedule: (1) 33 percent of all OGV by December 2009 (2) 66 percent of all OGV by March 2012, and (3) 100 percent of all OGV by December 2014. Lease stipulations shall include consideration of alternative technologies that achieve 90 percent of the emission reductions of cold-ironing.").

NRDC DSEIR-17

project.[54] The SDEIR does not explain why a 100% AMP requirement is *in*feasible at the China Shipping terminal when shipping lines have been—and are increasingly planning to—comply with the same requirement and the Port of Los Angeles and the Port of Long Beach.

Regardless, even if the 100% AMP requirement is somehow infeasible, the Revised Measure must be strengthened to meet the Port's CEQA obligation to adopt all feasible mitigation measures. Indeed, the reasons listed in the SDEIR for why MM AQ-9 is infeasible all relate to why achieving 100% compliance with *AMP* is not possible. SDEIR at 2-12–2-13. The SDEIR does not, however, explain why 100% of ships could not use AMP *or* an alternative emissions control technology, and in fact promotes the use of such alternative technologies when AMP is not used. *Id.* Accordingly, the SDEIR could consider a measure where by 2018, 100% of ships at dock are mitigating at-berth emissions with either shore power or an alternative emissions control system. Limited exceptions could be granted for emergencies.

This recommendation is supported by recent comments submitted by the State of California on the Port's Everport project. In its comments, CARB urged the Port to require a 100 percent shore power compliance rate from vessels equipped with short power, and alternative capture and control systems for all ships that are not equipped to use shore-based electricity.[55]

NRDC DSEIR-18

Finally, the SDEIR claims that "the Port does not have the authority to impose any specific emissions reduction technology on OGVs as they are internally flagged vessels subject only to IMO regulations." SDEIR at 3.1-45. This is an inaccurate statement of the law given the Port's authority as a landlord to impose lease conditions on its tenants, including China Shipping, and is contrary to the authority the Port proposes to assert under its revised measures for ships.

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[54] Mitigation Measures: Berth 136-147 [TraPac] Container Terminal Project EIR (FEIR Mitigation List) at 4, *available at* https://www.portoflosangeles.org/EIR/TraPac/FEIR/FEIR_Mitigation_List.pdf (Attachment C14) ("MM AQ-6: AMP. Ships calling at Berth 136-147 shall use AMP while hoteling at the Port in the following at minimum percentages: (a) 2009: 25% of ship calls; (b) 2010: 50% of ship calls; (c) 2012: 60% of ship calls; (d) 2015: 80% of ship calls; and (e) 2018: 100% of ship calls. Additionally, by 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at 100 percent compliance rate, with the exception of circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship."). As of the date of this comment letter, it is our understanding that Trapac is in full compliance with the measures outlined in its FEIR.

[55] Letter from E. Yura, CARB, Chief, Emissions Assessment Branch Transportation and Toxics Division, to C. Cannon, City of Los Angeles Harbor Department and T. Stevens, U.S. Army Corps of Engineers (June 5, 2017) (commenting on the Everport Container Terminal Project Draft EIR) (Attachment E6). CARB's push for a 100% compliance rate is consistent with its March 2017 resolution wherein it directed its staff to "within 18 months. . . develop At-Berth regulation amendments that achieve up to 100% compliance by 2030 for LA Ports." CARB, Resolution 17-7, 2016 State Strategy for the State Implementation Plan (March 23, 2017), available at https://www.arb.ca.gov/planning/sip/2016sip/res17-7.pdf (Attachment G1); *see also* Attachments D1-D2, G4 (CARB certification of at berth alternative control systems).

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Given the number of vessels that are anticipated to visit the terminal, the length of time these larger vessels will be docked for offloading, and the amount of emissions released while vessels are at berth, requiring 100% of vessels to mitigate at-berth emissions would meaningfully reduce operational emissions.

D. The 2008 VSR Measure (MM AQ-10) is Feasible

The Port should maintain a 100% compliance rate with the Port's vessel speed reduction program, as envisioned in the 2008 EIR.

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The 2008 EIR, MM AQ-10, required that starting in 2009, 100% of ocean going vessels calling at the China Shipping Container Terminal comply with the Port's VSR program within a 40 nm radius of Port Fermin.[56] The SDEIR purports that a 100% compliance rate is infeasible, and proposes to revise the measure to require 95% compliance starting in 2018.

The SDEIR asserts that vessels cannot achieve a 100% compliance rate because of vessel schedules, weather, port delays, mechanical problems, and the need to maintain economic competitiveness. SDEIR at 2-14, 2-15. These reasons, however, are generically asserted. The SDEIR does not point to any data or statements from China Shipping validating the Port's infeasibility claims, or analysis finding that the original VSR requirements would render China Shipping's operations economically impracticable. Further, nothing has changed since 2008 that would have rendered the VSR measure feasible in 2008 and infeasible now.

Moreover, the Port's own data and data from its neighbor, the Port of Long Beach, demonstrate that a 100% compliance rate is achievable. For example, the Port's website indicates the China Shipping Terminal was 100% complaint with the Ports VSR program at both 20 nm and 40 nm in 2016.[57]

And data from the Port of Long Beach, which also operates a VSR program, demonstrates that in 2016, 113 vessel operators achieved 100% compliance with Long Beach's VSR program within the 40 nm zone.[58] One of these vessel operators was China Shipping Container Lines, while

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[56] FEIR Mitigation Monitoring and Reporting Program at 2-13.

[57] Port of Los Angeles, Vessel Speed Reduction Compliance (2016), *available at* https://www.portoflosangeles.org/environment/progress/wp-content/uploads/2017/01/VSR-Graphic-1-4-2017-2.pdf (Attachment C6).

[58] Port of Long Beach, Green Flag Incentive Program Operator Compliance Monthly Report (1/1/2016–12/31/2016), *available at* http://www.polb.com/civica/filebank/blobdload.asp?BlobID=13769 (Attachment C7). Long Beach has a voluntary, incentive based program that rewards vessel operators for slowing down to 12 knots or less within 40 nautical miles (nm) of Point Fermin. Port of Long Beach, Green Flag Incentive Program, *available at* http://polb.com/environment/air/greenflag.asp (Attachment C8). In some instances, however, such as for tenants at the Port of Long Beach's Middle Harbor property, VSR is a mandatory lease requirement. Given that the VSR programs at both ports are largely a voluntary incentive based program, operators can elect not to participate in the

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another was Yang Ming (one of the shipping lines that uses China Shipping's terminal). *Id*.; SDEIR at 2-12.

The Port of Long Beach has also certified environmental impact reports requiring 100% compliance with VSR. The Middle Harbor project required 100% compliance by 2014.[59] And the tenant at Middle Harbor, Orient Overseas Container Lines (OOCL), had a 100% compliance rate with VSR in 2016.[60]

Recent comments by the State of California on the Port of Los Angeles' Everport DEIR/DEIS also indicate that the Port should adopt a VSR measure that requires compliance beyond 95%.[61] In CARB's comments, the agency noted that the terminal's vessels were already meeting an above 95% compliance rate in recent years, and thus, the Port should propose further mitigation to achieve additional emissions benefits.[62] Similarly, vessels serving the China Shipping Container Terminal had a 96% compliance rate within 40 nm in 2014, and as stated, 100% compliance in 2016. SDEIR at Table 2-1.[63] Accordingly, actual operations at the China Shipping terminal demonstrate that the revised measure's 95% compliance rate must be strengthened to comply with CEQA.

For the above reasons, the SDEIR fails to overcome the presumption that a 100% compliance rate for VSR is feasible, and has not demonstrated that a 95% compliance rate satisfies the Port's obligation to adopt all feasible mitigation measures.

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Finally, the revised VSR measure envisions that a vessel operator shall either comply with VSR 95% of the time, or "comply with an alternative compliance plan approved by the Port for a specific vessel and type." SDEIR at 2-15. The Revised Measure goes on to state that the alternative compliance plan shall demonstrate that it will "achieve emissions reductions comparable to or greater than those achieve by compliance with the VSRP." *Id*. In theory, we support providing compliance options to vessel operators that can achieve equivalent emissions reductions. The SDEIR, however, does not provide any details on what might be included in the alternative compliance plan. Thus, there is no way for the public to provide input on whether

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program. Thus, the number of vessel operators cited as in 100% compliance with the program at the Port of Long Beach could be higher if the VSR requirements were mandatory.

[59] Port of Long Beach Middle Harbor FEIR, Table ES.8-1, *available at* http://polb.com/civica/filebank/blobdload.asp?BlobID=6227(Attachment C12 ("Mitigation Measure AQ-4: Expanded VSRP. All OGV that call at the Middle Harbor container terminal shall comply with the expanded VSRP of 12 knots from 40 nm from Point Fermin to the Precautionary Area.").

[60] Port of Long Beach, Green Flag Incentive Program Operator Compliance Monthly Report, 1/1/2016–12/31/2016, *available at* http://www.polb.com/civica/filebank/blobdload.asp?BlobID=13769 (Attachment C7).

[61] Letter from E. Yura, CARB, Emissions Assessment Branch Chief, Transportation and Toxics Division, to C. Cannon, City of Los Angeles Harbor Department and T. Stevens, U.S. Army Corps of Engineers at 5 (June 5, 2017) (Attachment E6).

[62] *Id.*

[63] *See also supra* Port of Los Angeles, Vessel Speed Reduction Compliance at note 57.

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those alternative measures are equivalent to VSR in terms of emissions reductions, or if they have unintended impacts, such as increasing the likelihood of whale strikes. The SDEIR must include such information.

E. The Cargo Handling Equipment Measures (MM AQ-15, AQ-16, AQ-17) Are Feasible, and Can Be Strengthened to Require Utilizing Zero Emission Technologies

NRDC DSEIR-21

The SDEIR does not overcome the presumption that the 2008 EIR mitigation measures for cargo handling equipment are feasible, and weakens the measures without providing a legally valid reason for doing so. The SDEIR also fails to consider the full range of feasible mitigation measures for its revised cargo handling equipment mitigation measures. **In general, the cargo handling equipment mitigation measures should be revised to require accelerated deployment of zero emission cargo handling equipment, achieving 100% zero emission cargo handling equipment by 2030 at the latest.** These comments address the mitigation measures for each category of cargo handling equipment in turn.

Local and state entities have sent clear signals to the ports that zero emission cargo handling equipment technologies must be implemented in the near term. The Mayors of Los Angeles and Long Beach issued an executive directive four days before the release of the SDEIR, setting a goal that the ports fully implement all zero emission cargo handling equipment by 2030. The goal of 100% zero emission cargo handling equipment by 2030 is also required by the Draft CAAP Update 2017, which has emphasized that accelerated deployment of currently available zero emission technologies is critical to achieving this ambitious equipment turnover. Further supporting this goal, CARB adopted a resolution in March 2017 directing staff to develop regulations for cargo handling equipment to achieve up to 100% zero emissions by 2030.[64]

First, as explained in detail in these comments, the mitigation measures for cargo handling equipment set forth in the 2008 EIR are feasible. Second, and in accordance with CEQA's mandate to consider all feasible mitigation measures, the SDEIR can and should incorporate enhanced mitigation measures that will achieve the zero emission future envisioned by the Mayors, San Pedro Bay Ports, and CARB. The project should include a mitigation measure that requires all zero emission cargo handling equipment by 2030, and should deploy zero emission equipment much more rapidly where it is feasible to do so. The project should also contain a strong plan to develop the electric infrastructure necessary to support zero emission technology. Finally, the project should be revised to implement additional zero emission technology demonstration projects. [65]

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[64] CARB, Resolution 17-7, 2016 State Strategy for the State Implementation Plan (March 23, 2017), *available at* https://www.arb.ca.gov/planning/sip/2016sip/res17-7.pdf (Attachment G1).

[65] In numerous documents, the Port has emphasized the critical importance of technology demonstrations as a step to emissions reductions. Conducting demonstration projects would also align with one of the key strategies of the 2017 draft update to the San Pedro Bay Ports' Clean Air Action Plan, which plans to support implementation of CARB's 100% zero emission cargo handling equipment regulation by "demonstrating new technologies, accelerating deployment through a concerted funding strategy, and accelerating requirements through leases where

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Many types of zero emission cargo handling equipment are commercially available and currently operating in several terminals at the Ports of Los Angeles and Long Beach. There are already 333 pieces of zero emission cargo handling equipment operating at the Ports of Los Angeles and Long Beach, and planned projects boost the number to 573 by 2025.[66] Specifically, zero emission cargo handling equipment used at the Trapac and Middle Harbor terminals demonstrate that in addition to reducing diesel emissions and greenhouse gases, replacing diesel fueled cargo handling equipment with high density automated electrified equipment can result in significant efficiency gains.[67] This has been shown to lead to cost savings, allows terminals to handle increased cargo volumes, and results in lowered truck turn times.[68] Our understanding is that the Trapac terminal has maintained the same level of jobs with electrification and automation. With that said, we strongly encourage that efforts to automate terminals be coupled with workforce development and training so that workers can transition to new jobs to support the new technologies. In short, zero emission cargo handling equipment is not only technologically feasible, it also increases efficiencies and profits, and is compatible with job retention.

Thus, as a first step, the SDEIR should study the terminal operations at Trapac and Middle Harbor, account for the types of equipment utilized at those terminals (which we understand is nearly 100% electric), and set forth similar measures for this project.

NRDC DSEIR-22

i. The 2008 Electric Rubber-tired Gantry Crane Measure (MM AQ-17) Is Feasible.

The 2008 EIR MM AQ-17 required that all rubber-tired gantry cranes shall be electric by January 1, 2009. Today, eight years past the deadline, none of the rubber-tired gantry cranes (RTGs) are fully electric. The SDEIR's revised measure requires only four electric RTG cranes to be installed by 2025—nearly 80% short of the initial requirement, to be implemented 16 years late. It also requires some of the RTG cranes to be replaced with diesel-electric hybrids. It is unclear how many hybrids would be required under the new measure.[69] As discussed below, the

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possible." 2017 Draft Clean Air Action Plan Update at 41. To the extent that certain types of zero emission terminal equipment are not yet commercially available or proven in widescale deployment, the Port should require near-term demonstration projects for those pieces of technology, requiring replacement with zero emission technologies contingent on the success of those projects. Or, the measures could tier from demonstration projects that are currently happening at other terminals, and require replacement of equipment with zero emission technologies once those projects are completed successfully.

[66] 2017 Draft Clean Air Action Plan Update at 44, Table 3.

[67] Electrification of cargo handling equipment does not necessarily require automation.

[68] JOC.com, "LA-LB terminals, carriers try to ensure ports' green plan doable," *available at* https://www.joc.com/port-news/us-ports/la-lb-terminals-carriers-try-ensure-ports-green-plan-economically-feasible_20170309.html (Attachment H4); JOC.com, "Automation halves truck turn times at Long Beach port terminal," *available at* https://www.joc.com/port-news/us-ports/port-long-beach/automation-halves-truck-turns-times-long-beach-port-terminal_20160531.html (Attachment H5).

[69] The SDEIR offers inconsistent accounts of how many RTGs operate at the terminal, and does not specify which RTGs would be replaced. Table 2-5 lists a total of 19 RTGs, but only provides

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SDEIR does not overcome the presumption that the 2008 EIR's electric RTG measure is feasible. **The Port should maintain the requirement to replace all RTGs with fully electric, zero emission RTGs, and should install 5 zero emission RTGs by 2018, 5 additional zero emission RTGs by 2020, and replace the rest of the RTGs with zero emission RTGs by 2023.**

In order to delete or modify a mitigation measure, an agency must state a legitimate reason supported by substantial evidence. The SDEIR does not offer sufficient evidence to explain why the original mitigation measure for RTGs was never implemented. To the contrary, the Port admits that it is feasible to install at least four additional electric RTGs today—the SDEIR states that the infrastructure currently exists to support four electric RTGs in the surcharge area.[70] The Port fails to explain why it has delayed in installing these four electric RTGs in the surcharge area, despite acknowledging that this installation was clearly feasible. According to a draft evaluation of compliance status updated in September 2014, the WBCT had plans to replace existing diesel-powered RTGs with five electric RTGs and five hybrids by the end of 2014.[71] The Port does not acknowledge these plans in the SDEIR nor do they explain why these plans were abandoned.

Moreover, the Port's reasoning for changing the mitigation measure does not overcome the presumption that replacing all of the RTGs with zero emission electric RTGs is feasible. And in fact, while the Port failed to meet its mitigation obligation by requiring electric RTGs, the Long Beach Container Terminal proved the feasibility of this measure by installing, testing, and initiating full-scale operation of electric RTGs at their new terminal located at the nearby Port of Long Beach.

The Port does not provide any evidence to support its vague statements that terminal configuration, costs, and space constraints make the measure infeasible. In addition, the Port fails to explain what makes implementation of electric RTGs infeasible *now* as compared to when the final EIR was certified in 2008. Was the terminal previously configured in a way that could have accommodated all-electric RTG cranes? Could the terminal have been developed in a way to make the configuration work differently or to provide the infrastructure to support

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model years for 18 RTGs. SDEIR at 2-17. In another place, the SDEIR reports that there were 13 RTGs operating at the terminal in 2014. SDEIR at 2-16. By contrast, the 2008 Final EIR contemplated a total of 10 all-electric RTGs operating at the terminal. *See, e.g.*, 2008 FEIR Figure ES-2, p. 3-5. The types of technologies reported are also inconsistent: on one page the SDEIR reports that there are currently two hybrid diesel-electric RTGs operating at the terminal, and on another page reports that there is only one hybrid operating. *Compare* SDEIR at 2-16 *with* SDEIR at 2-4. The Revised AQ-17 would require replacement of RTG model years 2004 and older, and one model year 2005 RTG with diesel-electric hybrids. The Port should clarify these inconsistencies, and add information about how many total RTGs will be operating at the port and what they will be replaced with.

[70] SDEIR at 2-17, 3.1-46.

[71] Draft Evaluation of Compliance Status and Compliance Cost for Mitigation Measures for China Shipping Terminal (Nov. 20, 2013, revised Sept. 29, 2014) (Attachment A21 at POLA000812-13).

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electrification? How much did delay in implementation contribute to today's cost estimates of compliance? The Port must answer these questions to overcome the presumption that the requirement to install all-electric RTG cranes was, and still is, feasible.

When the 2008 Final EIR was certified, only four RTG cranes were in operation at the terminal. MM AQ-17 required that all RTGs be replaced with electric RTGs by 2009. Yet, following certification of the Final EIR, the terminal purchased a number of new, non-compliant cranes, purchasing at least two new non-compliant cranes with model years 2011 and 2013.[72] The Port must explain why new diesel cranes were purchased instead of electric cranes, in flagrant violation of the 2008 Final EIR.

Further, to the extent that these newer, noncompliant purchases increase the costs of electrification today (because they would require replacing the cranes before the end of their useful life), the Port may not use the additional costs incurred to argue infeasibility. In addition, the record shows that the Port paid China Shipping at least $22 million to offset the costs of complying with the ASJ.[73] Any cost estimates from China Shipping related to complying with air quality mitigation measures or claims of competitive disadvantage should take these contributions into account.

The presumption that installing all-electric RTG cranes is feasible is bolstered by a plethora of evidence that electric RTGs are commercially available and relatively inexpensive substitutes for diesel. CARB has recognized that electric rubber-tired gantry cranes are a "commercially available, mature technology for container handling."[74] There are at least five commercially available grid electric RTG models, and at least five commercially available grid electric retrofits.[75] Electric RTGs have been in-use at foreign ports since 2002, and are currently in-use at domestic ports.[76] To give one example, the Port of Long Beach is repowering nine rubber-tired gantry cranes to full electric power.[77]

Electric RTGs are not only commercially available, they are also relatively inexpensive replacements for diesel. Electric-powered RTGs are only about 10 percent more expensive than diesel models.[78] The operating cost benefits of electric RTGs are significant because they result

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[72] SDEIR at 2-17, Table 2-5. As explained in the prior footnote, the exact number and type of RTGs operating at the terminal is unclear.
[73] Attachment A68 at POLA001715 (describing $22 million contribution to China Shipping); Attachment A68 at POLA001722 (describing multi-million dollar payments to China Shipping to cover the costs of e.g., yard tractors and rubber tired gantries).
[74] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment, III-11, table III-2 (2015), *available at* https://www.arb.ca.gov/msprog/tech/techreport/che_tech_report.pdf (Attachment E2).
[75] *Id.*; *see also* Attachment J8 (zero emission RTG by Kalmar).
[76] *Id.* at III-12.
[77] Draft CAAP Update 2017 at 43.
[78] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-12.

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in maintenance cost savings and provide significant reductions in energy usage, on the order of 60 percent compared to diesel-fueled cranes.[79]

For the above reasons, the SDEIR fails to overcome the presumption that requiring replacement of all RTG cranes at the terminal with zero emission RTGs is feasible.

ii. The Yard Tractor Measures (MM AQ-15 and AQ-17) are Feasible, and Can Be Strengthened to Require Zero Emission Yard Tractors

NRDC DSEIR-23

The Port fails to overcome the presumption that the 2008 EIR mitigation measures for yard tractors are feasible. Moreover, the Port has failed to consider all feasible mitigation measures in revising its technology requirements for yard tractors. **The Port should strengthen MM AQ-15 to require the terminal to transition to all zero emission yard tractors.**

The 2008 EIR MM AQ-15 required that all yard tractors run on alternative fuel beginning in September 2004 (as required by the ASJ) through the end of 2014, and that by 2015 all yard tractors utilize cleanest available NOx engines meeting 0.015 gm/hp-hr for particulate matter.[80] MM AQ-17 required that China Shipping participate in an electric yard tractor pilot project, requiring them to deploy two electric yard tractors within one year of lease approval and, if the program was deemed successful, to replace half of the terminal's tractors with electric tractors within five years.

The project did not achieve the alternative fuel requirement until four years after the ASJ deadline.[81] Today, none of the yard tractors meet the engine requirement, and the electric yard tractor pilot project has not been implemented. The yard tractors also fail to meet the 2010 deadline to achieve Tier 4 engine standards under CAAP Measure SPBP-CHE1.[82]

The SDEIR's Revised Measures delete the electric yard tractor pilot project, and push back the engine requirement compliance deadline by eight years, to 2023. The Port states no legally valid reason for making these changes, and fails to overcome the presumption that the original measures are feasible.

The SDEIR silently glosses over the deletion of the 2008 EIR requirement for deploying an electric yard tractor pilot project, without even attempting to provide a reason or explanation for the deletion. The record gives us no reason to believe that the demonstration project was infeasible. Communications between representatives of China Shipping and Los Angeles dated March 25, 2015 stated that WBCT would be able to participate in a one-year pilot project if a

[79] *Id*. at III-13.
[80] FEIR Mitigation Monitoring and Reporting Program at 2-14.
[81] About 60 percent of tractors did not comply with this ASJ requirement until 2008, almost four years later than the 2004 deadline. SDEIR App. D at 20, Table 17 (showing that only 40-42% of tractors were in compliance with the alternative fuel requirement between 2005 and 2008).
[82] San Pedro Bay Ports, Clean Air Action Plan 2010 Update, at 128 (Oct. 2010), *available at* http://www.cleanairactionplan.org/documents/2010-final-clean-air-action-plan-update.pdf (Attachment C1) ("CAAP Update 2010").

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suitable tractor could be found, and failed to explain why it had not been implemented yet. [83] Suitable tractors were available at that time, and were being used at other terminals and facilities.[84] Successful implementation of the electric yard tractor pilot project would have resulted in half of the terminal's yard tractors being replaced with zero emission yard tractors, significantly reducing terminal emissions. Furthermore, as the San Pedro Bay Ports have stated in numerous reports and studies, demonstration of zero emission technologies is an important step to accelerating deployment of emissions reducing technologies, creating markets, and sending demand signals to manufacturers.[85]

NRDC DSEIR-24

The Port also fails to explain why the yard tractor engine requirement was not met, and fails to state a legitimate reason for extending the deadline to 2023. The Port argues that the engine requirement is economically infeasible and that technology is not available to meet the requirement, yet both of these arguments are defective. The claim that the measure is economically infeasible now is not persuasive, since the Port has not explained what changed between 2008 and today to make the measure infeasible, and has not provided any cost analysis. As Los Angeles has recognized, China Shipping could have presented evidence of economic infeasibility when the 2008 EIR/EIS was certified, but chose not to do so.[86]

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The Port's arguments about the feasible replacement schedule for yard tractors are not supported by substantial evidence either. In a March 25, 2015 letter, representatives for China Shipping indicated that replacements for the earliest purchased yard tractors would be due in three to five years, and that replacements for the 102 yard tractors purchased in 2007 and 2008 would come

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[83] Letter from Erich P. Wise, Flynn, Delich & Wise LLP, to Janna B. Sidley, Office of the City Attorney, City of Los Angeles (March 25, 2015) (Attachment A33 at POLA000995).
[84] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment, pp. III-17 to III-19, Table III-4 (Attachment E2); Port of Los Angeles, Zero Emission White Paper (July 2015), A1-3, Table A1-1 (Attachment C11).
[85] The Port has recognized that demonstration projects are the pathway to commercializing future technologies that have life-saving emissions reductions. Its own Zero Emission White Paper lionized the importance of demonstration projects for yard tractors in demonstrating successful technologies for drayage trucks, stating that they are a preferred type of technology for demonstrations due to the controlled environment within the port, providing a "simpler and more stable platform for demonstration," and stating that "increased expenditures focused on developing off-road zero emission yard tractors would help to ***accelerate*** the commercialization of on-road short haul drayage trucks." Port of Los Angeles, Zero Emission White Paper at 55; 23–25. The White Paper lists extensive reasoning why developing zero emission yard tractors should be a priority for the Harbor District, including that demonstration is easier within the terminal, off-road requirements are less stringent, the limited range within the terminal reduces EV range anxiety, the potential for a large electric yard tractor market worldwide would accelerate commercialization, that longer term payback may be more palatable to yard tractor tech developers than electric drayage truck developers, and that electric yard tractor development complements development of heavy-duty trucks. *Id*. at 23–25.
[86] Letter from Janna Sidley, Office of the City Attorney, City of Los Angeles to China Shipping (March 3, 2015) (Attachment A32).

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due in five to six years.[87] Under this logic, a feasible time frame for replacement tied to the useful life of the tractors could be due as early as March 2020, rather than the 2023 deadline suggested by the SDEIR.

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In addition, the Port must consider all feasible alternatives under CEQA. The SDEIR currently improperly narrows the feasibility analysis to LPG fueled yard tractors based on the technology that WBCT "prefers."[88] The SDEIR relies on estimates of the costs of LPG yard tractors and an LPG engine manufacturer's production rates when determining the feasible schedule of replacing the current tractors.[89] The Port fails to consider other types of proven technologies that could have emission reducing benefits beyond LPG engines, including electric yard tractors, hybrid electric engines, and Automated Guided Vehicles.[90] These other technologies may be more cost effective and commercially available. It is unacceptable that WBCT's "preference" should determine the scope of technologies considered under CEQA. The Port is required to consider all feasible technologies.

In particular, the Port's cursory dismissal of zero emission yard tractors does not satisfy CEQA, and is not supported by the evidence. Various terminals at both ports are using electric yard tractors in regular operations.[91] Long Beach Container Terminal (LBCT) at Middle Harbor is using electric yard tractors. Our understanding is that Trapac is also using electric yard tractors or equivalent equipment. As noted above, the Port should assess the electrified operations at both terminals and set forth similar measures here. Other examples of electric yard tractors in use include:

- At two terminals at the Port of Long Beach, CEC is funding a demonstration of 12 battery-electric yard tractors.[92]
- The Port of Los Angeles Everport terminal has a project underway to demonstrate eight zero emission yard tractors and 20 near-zero emission yard tractors.[93]
- The Port of Los Angeles Pasha terminal is demonstrating four zero emission electric yard tractors.[94]
- In March 2017, the first of 27 all-electric yard trucks started work at a freight yard in Southern California, funded by the State of California through a special emissions

[87] Letter from Erich P. Wise, Flynn, Delich & Wise LLP to Janna B. Sidley, Office of the City Attorney, City of Los Angeles (March 25, 2015) (Attachment A33 at POLA000994).
[88] SDEIR at 2-15.
[89] Although AQ-15 is supposedly "technology neutral," the information provided about costs, the number of tractors that could be replaced in a given year, and the anticipated replacement schedule are calculated based on the assumption that new LPG tractors will be acquired. SDEIR at 2-15 to 2-16; B1-17, Table B1-C.
[90] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment, at III-5, Table 1; III-6 to III-7; III-29.
[91] Draft CAAP Update 2017 at 40.
[92] *Id.* at 43.
[93] *Id.*; CEC grant announcement (Attachment H3); Everport Terminal DEIR, presentation (Attachment C4).
[94] Draft CAAP Update 2017 at 42.

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reduction program that aims to expedite commercialization of zero emission heavy-duty trucks.[95]

- Manufacturers TransPower, OrangeEV, and Balqon have conducted or planned electric yard tractor demonstration projects at several different sites in the U.S.[96]

In addition, there are currently at least three Zero Emission Class 8 Electric Tractors available on the market:

- TransPower - Electric Class 8 Electric Yard Tractor
- BYD - Electric Class 8 Tractor - 8Y
- Terberg - Electric Class 8 Yard Tractor - Terberg YT202-EV[97]

Electric yard tractors are also cost effective, as their prices are expected to "drop significantly" as the technology matures, and their lifetime costs are reduced compared to traditional technologies because they save on engine maintenance, fuel costs, and employ a regenerative braking system that reduces brake wear.[98] For instance, Orange EV estimates that an owner of 10 electric yard trucks would save $6 million over 10 years in reduced fuel and maintenance costs.[99] The numerous deployments and manufacturers of zero emission yard tractors make it clear that requiring all electric yard tractors is feasible.

For the reasons stated above, the Port should strengthen MM AQ-15 to require replacing LPG yard tractors with electric yard tractors in the near-term.

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iii. The Forklift Measure (MM AQ-17) is Feasible, and Should Be Strengthened to Require Zero Emission Forklifts.

The 2008 EIR MM AQ-17 required that starting in January 2009, all forklifts purchased meet certain engine standards,[100] and that all forklifts meet Tier 4 off-road engine standards by the end of 2012. The Port does not clearly state whether these original mitigation requirements were

[95] *See* CARB News Release: "First of 27 electric trucks coming to Southern California freight and rail yards," *available at* https://www.arb.ca.gov/newsrel/newsrelease.php?id=900 (Attachment H6).
[96] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-17 to III-19, Table III-4.
[97] *Id.*; *see also* Attachments J1–J2, J13, J20 and J23 (data from technology manufactures including BYD, Terberg, and Transpower).
[98] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-20.
[99] *Id.* (citing Orange EV, Lower Total Cost of Ownership – Orange EV, May 2015, http://orangeev.com/lower-total-cost-of-ownership/).
[100] Starting January 2009, equipment purchases including forklifts shall be either 1) the cleanest available NOx alternative-fueled engines meeting 0.015 gm/hp-hr for PM or 2) the cleanest available NOx diesel-fueled engine meeting 0.015 gm/hp-hr for PM; and if no engines are available to meet that standard, the new engines shall be cleanest available and have cleanest VDEC. FEIR Mitigation List.

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complied with,[101] and admits that at most, only two of fifteen forklifts currently meet Tier 4 standards.[102] The terminal also fails to comply with CAAP measure SPBP-CHE1, which required all forklifts to meet Tier 4 off-road engine standards by 2012.[103]

The SDEIR provides no explanation for why the mitigation measure was not met. Instead, the Port proposes a revised measure that shifts back the deadline for 18-ton forklifts to meet Tier 4 off-road engine standards to 2021, and adds a requirement to replace 5-ton forklifts of model years 2011 or older with electric forklifts by 2020.[104] While we support the Port's effort to require replacement of 5-ton forklifts with electric forklifts, the Port must go further to satisfy CEQA's mandate to consider all feasible mitigation measures. **The Port should strengthen MM AQ-17 to require the terminal to transition to all zero emission forklifts by 2035, starting with transitioning the oldest lower capacity equipment (2005 and older) to zero emission in 2018.**

Both fuel cell electric forklifts and battery-electric forklifts are available. Lower capacity battery electric forklifts are commercially available and widely used in warehouse applications.[105] Battery electric forklifts are only 10-20 percent higher in capital cost than diesel for capacities of up to 6,000 pounds, and return on investment for a battery electric forklift can be as short as 1 to 3 years due to reduced fuel and maintenance costs.[106] Fuel cell forklifts are also widely used,

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[101] While Appendix D breaks down the compliance rates for the original mitigation measures, it does not provide a clear breakdown of compliance for each type of cargo handling equipment that is covered by measures AQ-16 and AQ-17. *See* SDEIR App. D at 21, Table 19. For example, Table 19 in Appendix D shows that the terminal failed to fully comply with MM AQ-17 every year between 2005 and 2013, with a 0% compliance rate from 2007–2010. From this table, however, it is unclear whether the terminal has complied with the forklift measure to any degree in any given year. In addition, both tables 18 and 19 fail to list whether equipment less than 750 hp met the requirement for Tier 4 engines by 2012. Both tables also are cut off at year 2013, and thus fail to show to what extent the terminal complied with 2014 cargo handling equipment measures which required Tier 4 engines. Finally, the meaning of Table 18 listing compliance with AQ-16 is unclear given that the SDEIR states elsewhere that there is no way to distinguish between railyard equipment and terminal equipment. *See, e.g.*, SDEIR at 2-16, 2-5 ("there is no actual distinction between railyard equipment and terminal equipment as a whole."). What pieces of equipment were included in the calculations to determine compliance with AQ-16?

[102] *Id.* at 2-17.

[103] CAAP Update 2010 at 28.

[104] The Port must include additional information clarifying how many and which forklifts will be upgraded. According to Table B1-C, there is a schedule to replace 12 forklifts, upgrading 5 diesel forklifts of up to 18 tons to Tier 4 diesel or alternative fuel meeting Tier 4 (between 2019 and 2021), and another 7 LPG forklifts with capacities up to 5 tons upgrading to electric (2020). But the SDEIR indicates that there are 15 forklifts associated with the China Shipping terminal, so 3 are not accounted for in the replacement schedule.

[105] *See, e.g.*, Attachment J6 (describing Kalmar's electric forklift).

[106] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-20 to III-21 (also referencing (LiftsRUs, 2014) (EPRI, 2014)); CARB Mobile

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with about 8,000 hydrogen fuel cell electric forklifts operating at U.S. manufacturing facilities and warehouses, and 800 deployed in California.[107]

We were surprised to see that the project does not commit to an all zero emission hi-tonnage forklift requirement or even a demonstration project for that technology. The Port's bald claim that it is not feasible to electrify 12-ton and larger forklifts because forklifts above five tons are not available in all-electric models does not satisfy the CEQA requirement to consider all feasible mitigation measures.[108] Contradicting this statement, CARB has recognized that at least one manufacturer makes a forklift model with a lift capacity of 40,000 pounds, and lift capacities of up to 100,000 pounds are advertised.[109] And, the Pasha terminal at the Port of Los Angeles is demonstrating two hi-tonnage zero emission forklift retrofits.[110]

Replacing the hi-tonnage forklifts with new diesel equipment would invest the terminal in additional polluting equipment for the long-term, leave emissions reductions on the table, and hinder the terminal's ability to achieve 100% zero emission cargo handling equipment by 2030 as required by the CAAP, CARB regulations, and Mayors' Executive Directive.

For the reasons stated above, the Port should require all forklifts to be replaced with zero emission forklifts.

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iv. The Top-Pick Measure (MM AQ-17) is Feasible, and Should Be Strengthened to Require Zero Emission Top-Picks

The 2008 EIR MM AQ-17 required that by January 1, 2009, all toppicks shall have the cleanest available NOx alternative fueled engines meeting 0.015 gm/hp-hr for PM.[111] Today, none of the toppicks are alternative-fueled and only four meet the 0.015 gm/hp-hr PM standard.[112] The terminal also falls short of the CAAP, Measure SPBP-CHE1, Performance Standards for cargo handling equipment, which required toppicks to meet Tier 4 off-road engine standards by the end of 2012.[113]

Source Strategy, App. A at A-24 (Typically, maintenance costs 25 to 50 percent less, fuel is 20 to 40 percent of the cost of fueling an internal combustion forklift, and electric forklifts have a 50 percent longer useful life than internal combustion forklifts. These benefits can lead to payback time on the higher initial capital cost in as little as one year.).

[107] CARB Draft Heavy-Duty Technology and Fuels Assessment: Overview at 10. Manufacturers include Crown, Raymond, Hyster, Caterpillar, and others, and are in the early commercialization phase as of 2015. (Attachment E1)

[108] SDEIR at 3.1-46.

[109] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-20.

[110] Draft CAAP Update 2017 at 42.

[111] SDEIR at 2-4.

[112] *Id.*

[113] CAAP Update 2010 at 128.

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The SDEIR proposes to abandon the alternative fuel requirement and push back the engine standard deadline, requiring replacement of toppicks with Tier 4 off-road engines by 2023.[114] Instead, **the Port should require replacement of top picks with battery electric top picks by 2030, with interim milestones to phase-in the technology.**

The Port does not overcome the presumption that the 2008 EIR MM AQ-17 for toppicks is feasible. The SDEIR does not include any reasoning as to why the top-pick mitigation was not implemented, nor does it explain why the mitigation measure was revised to delete the alternative fuel requirement, nor does it state a legitimate reason for extending the deadline for compliance with the engine standard. The Port is required to justify its revision of the mitigation measure for toppicks.

The Port's proposed schedule for replacing the top-picks is not the fastest feasible schedule. In a letter dated March 25, 2015, representatives for China Shipping wrote that the 8 top picks purchased in 2002 (which have Tier 1 engines) could be replaced in the following 18 months (by mid-2016), and that a reasonable timeframe to replace the other 30 was 3–5 years (2018 to 2020).[115] The Port fails to explain why the Tier 1 toppicks were not replaced in 2016, even though it appears that this would have been feasible. At minimum, the eight Tier 1 toppicks should be replaced with zero emission or Tier 4 complaint toppicks by 2018, and the twelve model year 2006 and 2007 toppicks should be replaced by 2020.

In revising the measure, the Port must consider the feasibility of requiring zero emission top picks to be demonstrated and implemented at the project site. Electric toppicks are currently being demonstrated at other terminals. The Pasha terminal at the Port of Los Angeles is testing a zero-emission top handler retrofit.[116] The Everport terminal is demonstrating two zero emission top handlers.[117]

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[114] There is little clarity about how many units would be replaced, or which units would be replaced. For instance, will the dirtiest units servicing the West Basin Container Terminal be replaced, or will those be deemed not to be servicing the China Shipping terminal? In Appendix B1, Table B1-C the replacement schedule for top picks anticipates replacement of 38 units, listing eight 2002 models, three 2006 models, eight 2007 models, fifteen 2008 models, three 2011 models, and one 2014 model. By contrast, the SDEIR anticipates replacement of only 23 units (SDEIR at 2-17), and even more confusingly, Table B1-31 lists six 2006 models and six 2007 models. The SDEIR also states that the four model year 2011 and 2014 toppicks meet the Tier 4 interim standard—yet these toppicks do not meet Tier 4 off-road standards, and therefore would not meet MM AQ-17 as revised. SDEIR at 2-17. Would those four toppicks also be replaced under MM AQ-17?

[115] Letter from Erich P. Wise, Flynn, Delich & Wise LLP to Janna B. Sidley, Office of the City Attorney, City of Los Angeles (March 25, 2015) (Attachment 33 at POLA000995).

[116] Draft CAAP Update 2017 at 42.

[117] *Id.* at 43.

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At a minimum, the Port should require the terminal to participate in a zero emission toppick demonstration project, or to require installation of electric toppicks contingent on the result of the demonstration at Pasha or Everport.

v. The Revised Measure for Sweepers and Shuttle Buses (MM AQ-17) Should Be Strengthened to Require Near-Term Replacement with Zero Emission Technologies

NRDC DSEIR-29

The SDEIR proposes revised measures for sweepers and shuttle buses, requiring gasoline shuttle buses to be zero emission units by 2025 and requiring sweepers to be alternative fuel or cleanest available by 2025. While we support the Port's efforts to transition to zero emission shuttle buses, **the Port should strengthen MM AQ-17 to require immediate replacement with electric shuttle buses and revise MM AQ-17 to require implementation of battery electric sweepers.**

Preliminarily, the SDEIR makes it impossible to evaluate whether the proposed revisions are legitimate. The SDEIR does not explain which of the original mitigation measures it is relaxing with respect to sweepers and shuttle buses, nor does it assess compliance rates. Without this assessment, it is impossible to know whether the revised measures delete or extend prior emission reduction requirements.

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Further, the SDEIR fails to provide any justifications for its proposed 2025 deadline to replace diesel powered sweepers and shuttle buses.[118] Overall, the lack of information about the measures for sweepers and shuttle buses begs the question of whether these measures will actually be implemented. For example, the SDEIR fails to include these pieces of equipment in its proposed mitigation replacement schedule for cargo handling equipment.[119] The SDEIR also lacks basic information about the number of sweepers and shuttle buses operating at the terminal, and fails to disclose the terminal's compliance history for those pieces of equipment.[120]

In any case, the Port's stunted analysis of these two measures fails CEQA because it does not assess the viability of zero emission technologies. The Port has the obligation to consider all feasible mitigation measures, and both electric sweepers and shuttle buses are commercially available. Zero emission buses are commercially available today, and are quickly dropping in price.[121] Over 100 vehicles have been deployed.[122] For example, Phoenix Motorcars

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[118] SDEIR at 2-18.
[119] SDEIR App. B at B1-16, Table B1-C.
[120] The SDEIR offers contradictory accounts of how many sweepers are operating at the terminal, stating in one place that there is one sweeper at the West Basin Container Terminal, and in another place that there are two diesel-powered sweepers. SDEIR at 2-9, 2-16. Appendix B1, Table B1-31 listing the cargo handling equipment from the 2014 baseline includes one sweeper with model year 1995. The SDEIR does not list how many shuttle buses are currently operating at the terminal, nor does it provide any details about the types of shuttle buses employed.
[121] CARB Draft Heavy-Duty Technology and Fuels Assessment: Overview at ii, 8-9.
[122] *Id.* at 11.

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manufactures an electric zero emission shuttle bus that can drive up to 100 miles per charge and costs only $100,000 more than a similar diesel model.[123] In addition, battery electric powered sweepers "are mature technologies that are in use at distribution centers and manufacturing plants."[124]

For the reasons stated above, the Port should revise MM AQ-17 to require immediate replacement of shuttle buses with zero emission buses, and require battery-electric sweepers.

vi. Lease Measures AQ-1 and AQ-3 are not a substitute for considering all feasible mitigation measures

NRDC DSEIR-31

Lease Measures AQ-1 and AQ-3 do not satisfy the Port's duty under CEQA to consider all feasible mitigation measures in the SDEIR. Lease Measures AQ-1 and AQ-3 inspire no confidence that zero emission cargo handling equipment will be installed at the terminal. Lease Measure AQ-1 contains only vague language, and no assurance that emissions reducing technology will result from the measure. Given the Port's track record of failing to meet compliance dates and failing to hold terminal operators to technology requirements, we have no confidence that simply requiring conversations with the Port when tenants buy new technology will result in the purchase of a cleaner piece of equipment.

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Lease Measure AQ-3 is also too vague to be meaningful, pushes off introducing zero emission technology until far into the future, and allows tenants to avoid implementing zero emission technologies if their self-evaluations determine zero emission technology is infeasible. Lease Measure AQ-3 requires the tenant to conduct a one-year zero emission demonstration project with at least ten units of zero emission cargo handling equipment, and then assess the feasibility of using that equipment permanently. The Lease Measure does not specify what types of cargo handling equipment should be included, nor when the demonstration project is due. The tenant is not required to conduct a feasibility assessment evaluating zero emission technologies until 2020 and 2025, yet Lease Measure AQ-3 purports to support the goal of transitioning to zero and near-zero emission technologies by 2030. Without gathering this information and imposing interim deadlines in the near-term, we fail to see how it would be possible to transition to 100% zero emission cargo handling equipment by 2030. Finally, relying on the tenant's self-assessment of zero emission technology to determine feasibility cannot be counted on to lead to emission reductions, since it is in the tenant's best interest to avoid implementing zero emission technologies that can be costlier in the near term than sticking with status quo polluting equipment. It is the Port's obligation to impose and enforce mitigation measures, and Lease Measure AQ-3 provides the tenant too much discretion to decide what, when, and how zero emission equipment will be used.

[123] *Id.* at 12.
[124] CARB, Draft Technology Assessment: Mobile Cargo Handling Equipment Technology Assessment at III-20.

F. The LNG Truck Measure (MMAQ-20) is Feasible, And Can be Strengthened to Require Zero Emissions Vehicles

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In 2008, after a thorough study that included pulling back and revising the initial DEIR, the Port concluded that phasing-in LNG trucks at the China Shipping terminal was feasible. In 2013, the Port concluded that a similar facility-specific phase-in of cleaner trucks was feasible at the near-dock Southern California Intermodal Gateway (SCIG) project.[125]

Nothing has changed about the Port drayage system from 2008 to the present. Nothing. Hundreds of LNG trucks now serve the Port. LNG trucks composed 8.2% of the Port's truck calls in 2014, with the percentage likely increasing in future years.[126] Class VIII LNG trucks are readily available in the market.[127]

Rather than try to fix the problem that it caused, the Port now wants to avoid the whole issue by saying, for the first time in any EIR, that a terminal-specific drayage plan is infeasible. This systemic infeasibility argument is a litigation artifact, manufactured after the Port got caught violating CEQA in order to excuse the Port's actions. In hundreds of pages of documents that predate the disclosure of the Port's failure to meet the 2008 mitigation measures, the Port never once asserted that any of the 2008 mitigation measures was infeasible—in fact, the Port strongly criticized China Shipping for failing to present data on infeasibility. Nor does the Port's new argument meet the CEQA definition of infeasibility. Moreover, the Port's do-nothing approach to diesel trucks violates Mayor Garcetti's recent zero emission policy directive and exacerbates the greenhouse gas problem that the Port admits that it has.[128]

Today, much more is feasible than was the case in 2008. Short-haul zero emission trucks with 100-mile range and 1–3 hour charge times are available now that can service the near-dock railyards and peel-off yards. Trucks with a 200-mile range and faster charging time or replaceable batteries are being developed and tested now. These trucks are huge improvements

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[125] Los Angeles Harbor Department, Final Mitigation and Monitoring Program, SCIG Project EIR at 2-9 (March 2013) (MM AQ-8 requires phasing-in "low-emission drayage trucks" at the SCIG facility) (Attachment C9).
[126] SDEIR App. B at B-12.
[127] *See, e.g.*, "Natural Gas: What Fleets Need to Know, Part 2 – New Engines, More Options," *available at* http://www.truckinginfo.com/channel/fuel-smarts/article/story/2012/09/natural-gas-what-fleets-need-to-know-part-2-new-engines-more-options.aspx (Attachment J29); Cascadia Natural Gas: https://freightliner.com/trucks/cascadia-natural-gas/ (Attachment J30); https://cumminsengines.com/volvo; Kenworth: "Kenworth T680 and T880 Add Cummins Westport ISL G Near Zero Emissions Natural Gas Engine," *available at* http://www.kenworth.com/news/news-releases/2016/october/isl-g/; Peterbuilt: "Peterbuilt models 579, 567 Now Available with LNG Power," *available at* http://www.peterbilt.com/about/media/2015/459/ (Attachment J31); Mack: "Cummins Westport 1SX12 G Natural Gas," *available at* https://www.macktrucks.com/powertrain-and-suspensions/engines/cummins-natural-gas/.
[128] Joint Directive (Attachment D5); SDEIR at 3.2-21–3.2-41.

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over 2008 LNG trucks and diesel trucks, and will help with the Port's air pollution and greenhouse gas problems. The Port is required to analyze zero emission drayage in the SDEIR.

1. The LNG Truck Measures (MMAQ-20) Is and Was Feasible

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Mitigation measure MMAQ-20 in the 2008 EIR required a phase in of LNG trucks.[129] This did not happen. The Port knew contemporaneously that the phase-in was not happening because it had truck make information available to it through the port truck registry,[130] but did nothing to enforce the legally-binding mitigation measure except to nag China Shipping—which never agreed or expected to fund the LNG trucks.

In 2013, the Port approved a huge near-dock intermodal railyard project, SCIG. One of the approved mitigation measures called for a phase in of LNG-equivalent trucks to service the SCIG facility.[131] Although the SCIG matter is in litigation, the Port has never claimed in that litigation that this drayage measure is infeasible.

In fact, LNG trucks are in use now at the Port, as the Port's own data shows,[132] and others are readily available if it were a good idea to add them to the fleet now.[133] From a logistics standpoint, having one or two facilities served by LNG trucks is feasible as the Port recognized in 2008 and 2013 by the method of turning away non-LNG trucks at the gate.[134] Other measures to increase use of cleaner trucks could include expanding Pier Pass (encouraging trucks to work the Port in the evening), enacting a dirty truck rate and creating a preferential lane for clean trucks (as the Port contemplates in the draft Clean Air Action Plan), requiring cleaner trucks going to peel-off yards (also as contemplated in the draft Clean Air Action Plan), and providing other incentives through an appointment system such as are now in place at the TraPac facility and Middle Harbor in Long Beach.

Thus, nothing in the SDEIR overcomes the presumption that the previously certified LNG truck measure is feasible. *See Napa Citizens* at 359. The factual circumstances provided in the SDEIR for why the measure is not feasible today, SDEIR at 2-19–2-20, existed in 2008; nothing has changed. Either the Port was dishonest with the public in 2008 when it certified the measure, or it is being dishonest now. The fact that the current Port administration has changed its mind to

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[129] FEIR Mitigation Monitoring and Reporting Program.
[130] The Port of Los Angeles' drayage truck registry website is available at https://www.portoflosangeles.org/ctp/ctp_pdtr.asp.
[131] SCIG Final Mitigation and Monitoring Program at 2-9 (Attachment C9). The SCIG mitigation measure MM AQ-8 required phasing in "low-emission drayage trucks" at the SCIG facility. Such trucks were required to meet emissions standards that were comparable to LNG trucks at the time.
[132] *See* SDEIR App. B at B-12 (LNG trucks composed 8.2% of the Port's truck calls in 2014, with the percentage likely increasing in future years).
[133] *See supra* at note 127.
[134] *See* China Shipping FEIR, Responses to Comments at 2-188–2-189; SCIG FEIR, Responses to Comments Vol. 1 at 2-258–2-259 (Attachment C17).

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rationalize its failure to comply with binding mitigation measures has no bearing on the legal issues at play.

2. Zero Emission Drayage Trucks are Available Now for Short-haul and Must be Analyzed for Feasibility

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Zero emission drayage trucks are not a future science fiction fantasy. They are here now, particularly in short-haul applications that would be suitable for hauling containers from the Port to nearby off-dock railyards such as ICTF and SCIG (if SCIG is ever built). The South Coast Air Quality Management District (SCAQMD) recently described the status of zero emission drayage truck technology as follows:

> Heavy-duty diesel trucks in the South Coast Air Basin remain a significant source of emissions with adverse health impact, especially in the surrounding communities along the goods movement corridors near the Ports of Los Angeles and Long Beach (Ports), and next to major freeways. In order to mitigate the impact and attain stringent national ambient air quality standards for the region, SCAQMD has been aggressively promoting and supporting development and demonstration of advanced zero emission cargo transport technologies, in partnership with the Southern California Regional Zero Emission Truck Collaborative, comprised of the Los Angeles Metropolitan Transportation Authority, the Ports of Los Angeles and Long Beach, the Southern California Association of Governments, and the Gateway Cities Council of Governments.
>
> With two grants, totaling approximately $14 million from the DOE's Zero Emission Cargo Transport (ZECT) Program, the SCAQMD has engaged leading EV integrators, including BAE Systems, Transportation Power (TransPower) and US Hybrid, as well as a major truck manufacturer, Kenworth, to develop and demonstrate a variety of Class 8 electric drayage trucks, consisting of eleven zero emission trucks – six battery electric and five fuel cell trucks – and seven hybrid electric trucks with extended range using CNG, LNG or diesel ICEs. These trucks are deployed in real world drayage operations to evaluate the trucks' performance and capability as well as to identify limitations in supporting demanding drayage duty cycles. To date, five battery electric trucks (BETs) have been completed and deployed in field demonstration with drayage fleets at the Ports. With an estimated range of 80 to 100 miles per charge, these BETs are deployed in neardock and local operations within a 20-mile radius from the Ports and have been providing dependable service with positive feedback from fleet drivers on its quiet and smooth operations with sufficient power and torque. In addition, one CNG plug-in hybrid electric truck (PHET), with 30-40 miles in allelectric range (AER) and 150-200 miles of total operating range, is currently undergoing final validation testing before deployment and four more trucks, including two fuel cell trucks with 150-200 miles of range, are expected to be completed in Q1 2017.
>
> Leveraging the technologies and expertise gained from the ZECT program, SCAQMD proposed and received a $23.6 million grant from CARB under the Low

Carbon Transportation Greenhouse Gas Reduction Fund (GGRF) Investment Program for a larger-scale demonstration of advanced electric drayage truck technologies in 2016. The project is to develop a portfolio of most commercially promising zero and near-zero emission drayage trucks for a statewide demonstration, across a variety of drayage applications in and around the Ports of Long Beach, Los Angeles, Oakland, Stockton and San Diego. SCAQMD has partnered with the four largest and most emission-impacted air districts in the state, namely Bay Area AQMD, Sacramento Metropolitan AQMD, San Joaquin Valley APCD and San Diego APCD, to build a comprehensive and coordinated approach to demonstrate the electric drayage trucks in diverse geographic and operational challenges across the state's interconnected goods movement system.

For the project, the SCAQMD has successfully engaged three major truck OEMs – Kenworth, Peterbilt and Volvo, and an international OEM leader in heavy-duty electrification, BYD, to drive commercially-viable product development stages in a targeted portfolio of zero emission and near-zero emission technologies and efficiency solutions, consisting of two battery-electric trucks, and two plugin hybrid electric trucks with extended range capability, using natural gas or diesel ICEs, as follows:

BYD will develop 25 battery electric trucks based on their T9 prototype, which is optimized to serve near-dock and short regional drayage routes with a range of up to 100 miles. The truck is designed to provide similar operating experience compared to equivalent diesel and CNG trucks with matching or exceeding power and torque, using two 180 kW in-line traction motors.

Kenworth will develop four plug-in hybrid electric trucks with natural gas range extender, leveraging the prototype development under the ZECT program. These vehicles will target longer regional drayage routes, based a well-balanced blend of all electric and CNG-based hybrid operation to provide 250 miles in total operating range with a capability to operate 30-40 miles in zero emission mode in disadvantaged communities near ports, rail yards and distribution centers. The powertrain system includes a 200 kW genset using the recently certified 8.9L near-zero CNG engine and two AC traction motors, with comparable power output to Class 8 diesel trucks.

Peterbilt has partnered with TransPower to develop 12 battery electric drayage trucks, building on a platform developed under the ZECT program, incorporating lessons learned from ongoing demonstrations to further refine and optimize the electric drive system. Eight of the twelve trucks will be designed to provide up to 80-100 miles in range to support near-dock drayage routes, and four extended-range battery electric trucks will incorporate a new, higher energy density battery cells to provide up to 120-150 miles of operation to service regional drayage routes, such as from the San Pedro Bay Ports terminals to Inland Empire warehouses.

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> Volvo will build on the success of a past SCAQMD/DOE-funded project by focusing on efficiency and emission optimization of a commercially attractive, highly-flexible product, while ensuring zero emission miles for operations in the most heavily emissions impacted communities. Furthermore, Volvo, in partnership with LA Metro, will also integrate ITS connectivity solutions, such as vehicle-to-infrastructure and vehicle-to-vehicle communications targeting dynamic speed harmonization and reduced idling, to reduce fuel use and emissions.
>
> This exceptional portfolio features demonstrations of truly commercial-pathway trucks. Highlighting the commercial path reality of this portfolio, the principal contractors are all major heavy-duty truck OEMs. This is significant because major OEMs can bring necessary engineering resources, manufacturing capability, and a distribution/service network to support the future commercialization of these demonstration vehicles. Our partnership also includes LA Metro's participation with ITS efficiency integration, electric utility participation, and 13 confirmed end-user fleets who are experienced with the specific challenges and opportunities associated with early technology integration efforts. The relationships and technologies in this project represent a culmination of years of experience: leading truck manufacturers, innovative large and medium suppliers, air quality management districts and industry groups all coordinated in a focused push to create OEM-quality, commercially-viable products that both reduce criteria and carbon emissions.

South Coast Air Quality Management District, Technology Advancement Office, *Clean Fuels Program 2016 Annual Report and 2017 Plan Update* (March, 2017) at 16–18.[135]

In addition, Tesla has announced the development of a Class 8 heavy-duty truck.[136] Toyota is developing a 200-mile Class 8 fuel cell truck which it has displayed at the Port.[137] The US Hybrid fuel cell truck referenced in the SCAQMD material is also designed for a 200-mile range.[138]

The SDEIR ignores this information. The SDEIR also ignores the June, 2017 Joint Executive Directive from Mayors Garcia and Garcetti (issued the same week the SDEIR was published)

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[135] Attachment E16; *see also* South Coast Air Quality Management District, PowerPoint, Zero Emission Drayage Truck Demonstration: Low Carbon Transportation Greenhouse Gas Reduction Fund (Nov. 1, 2016) (discussing demonstration project of 43 zero emission drayage trucks from BYD, Peterbilt, Kenworth and Volvo). (Attachment E15).

[136] Forbes: "Can Tesla Disrupt the Trucking Market with Its Electric Semi Truck?" *available at* https://www.forbes.com/sites/greatspeculations/2017/09/18/can-tesla-disrupt-the-trucking-market-with-its-electric-semi-truck/#7049953e626d (Attachment J14).

[137] Wired: "Toyota's Still Serious About Hydrogen – It Built a Semi to Prove It," *available at* https://www.wired.com/2017/04/toyotas-still-serious-hydrogen-built-semi-prove/ (Attachment J19).

[138] Trucks.com: "US Hybrid Jumps into Hydrogen Fuel Cell Truck Arena," *available at* https://www.trucks.com/2017/05/04/us-hybrid-hydrogen-fuel-cell-truck/ (Attachment J24).

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confirming Los Angeles and Long Beach's commitment to transition to a zero emission freight transportation system, which includes a commitment to an all zero emission drayage fleet by 2035.[139] Also ignored are similar proclamations from Governor Brown, the state legislature (SB 350),[140] and state and local air quality regulators that California must transition to a zero emission transportation system for passengers and freight to meet the state's air quality standards and greenhouse gas reduction goals.[141]

Importantly, recent evidence from CARB shows that battery electric drayage trucks have a lower life cycle cost than even diesel trucks, with costs further declining in 2023.[142] Thus, we believe that the Ports should require, as a feasible mitigation measure, the following minimum percentages of zero emission trucks at the terminal:

- 2020: 1.5% Zero Emission Trucks
- 2024: 25% Zero Emission Trucks
- 2028: 60% Zero Emission Trucks
- 2030: 90% Zero Emission Trucks
- 2035: 100% Zero Emission Trucks

This is a balanced commitment that will ramp up to 100% over the next seventeen years, ultimately meeting the goal directed by the Mayors of Los Angeles and Long Beach. It can be met at China Shipping and at all terminals in both ports.

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Further, given that zero emission trucks for short-haul applications are feasible today, the Port should also consider how it can require short-haul drayage trips through the terminal to use such trucks. For example, the Port should consider requiring short-haul deliveries to and from near dock railyards or peel-off yards to be performed by zero emission trucks.

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[139] Joint Directive (Attachment D5).

[140] SB 350 directs agencies, including the Ports of Los Angeles and Long Beach, to prioritize widespread "transportation electrification" as a necessary step toward complying with state law and attaining ambient air quality standards. Pub. Util. Code § 740.12 (a)(1)(A), (a)(2) ("Advanced clean vehicles and fuels are needed to reduce petroleum use, to meet air quality standards, to improve public health, and to achieve greenhouse gas emissions reduction goals . . . It is the policy of the state and the intent of the Legislature to encourage transportation electrification as a means to achieve ambient air quality standards and the state's climate goals. Agencies designing and implementing regulations, guidelines, plans, and funding programs to reduce greenhouse gas emissions shall take the findings described in paragraph (1) into account.").

[141] Office of Governor Edmund G. Brown Jr.: "Executive Order B-32-15," *available at* https://www.gov.ca.gov/news.php?id=19046 (Attachment D3); CARB Sustainable Freight: Pathways to Zero and Near-Zero Emissions (Discussion Draft) at 1, *available at* https://www.arb.ca.gov/gmp/sfti/Sustainable_Freight_Draft_4-3-2015.pdf (Attachment D9).

[142] Attachment C16 at exhibit entitled "Advanced Clean Local Trucks (Aug. 30, 2017)."

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It is not factually or legally permissible for the Port to throw up its hands and give up on China Shipping truck mitigation. The Port needs to get back to work and analyze feasible alternatives to the existing diesel fleet and show real movement to meeting Mayor Garcetti's directive.

3. SB1 Does Not Override the Port's Duty to Adopt All Feasible Mitigation for Truck Emissions

NRDC DSEIR-37

The Port relies on Senate Bill 1 (SB 1)[143] as a rationale for giving up on clean trucks at China Shipping. But the text of SB1 amended the portion of the Health and Safety code that pertains to *CARB's* authority to reduce vehicular pollution, and no other agency. And section 43021 (c) limits the reach of the statute to "laws or regulations." The cities and ports have always maintained that port truck bans are not regulatory in nature but stem from the port's proprietary interests. And there is no evidence whatsoever that SB1 overrides, restricts, or somehow preempts an agency's duty to comply with its CEQA obligation to adopt all feasible mitigation measures.

CARB also agrees that SB1 does not limit the Ports' authority. CARB released a Discussion Paper on September 6 clarifying that SB 1 does not prohibit the Ports from "establishing their own measures to accelerate the transition to a cleaner port truck fleet and to reduce emissions from trucks serving their facilities."[144]

4. The Feasibility Problem, if it Exists, Can be Solved With a Port-wide Solution as Contemplated in the Mayors' Executive Directive

NRDC DSEIR-38

The Mayors' joint proclamation puts both ports on a path to zero emission technology, including drayage trucks. If the Port believes that a trucking system involving only two facilities, China Shipping and SCIG, is not optimal, the Mayors' proclamation sets out a path for fixing that, Port-wide. But the SDEIR fails to analyze this.

G. The Priority Access for Cleaner Drayage Measure (LM AQ-2) Should be Limited to Zero Emission Trucks

NRDC DSEIR-39

The SDEIR sets forth the following lease measure: "A priority access system shall be implemented at the terminal to provide preferential access to zero- and near-zero emission trucks." Because of the emissions and greenhouse benefits of zero emission trucks, and the zero emission goals of the Port and City, we recommend that this measure be strengthened to only provide priority access for zero emission trucks.

H. The Port Should Keep and Amend the Throughput Tracking Measure (LM AQ-23)

The SDEIR proposes to delete the following lease measure in the FEIR:

[143] Senate Bill 1 added section 43021 to the California Health and Safety Code.
[144] CARB, Discussion Paper: Implementation of March 2017 Board Direction on Reducing the Community Health Impacts from Freight Facilities (Sept. 6, 2017), *available at* https://www.arb.ca.gov/gmp/sfti/reducing_the_community_health_impact.pdf (Attachment E10).

NRDC DSEIR-40

> If the Project exceeds project throughput assumptions/projections anticipated through the years 2010, 2015, 2030, or 2045, staff shall evaluate the effects of this on the emissions sources (ship calls, locomotive activity, backland development, and truck calls) relative to the EIS/EIR. If it is determined that these emissions sources exceed EIS/EIR assumptions, staff would evaluate actual air emissions for comparison with the EIS/EIR and if the criteria pollutant emissions exceed those in the EIS/EIR the new or additional mitigations would be applied through MM AQ-22 Period Review or New Technology Regulations.

SDEIR at Table 2-1. The SDEIR contends that this measure is not necessary because the SDEIR "already takes into account the maximum capacity of the terminal and growth in TEU volume, and applies all feasible mitigation measures to address future air quality impacts." SDEIR at 2-21.

However, the SDEIR's throughput estimates are projections, and could be off (just as they were in the 2008 EIR). And technological advancements will certainly occur over the life of the project. The throughput tracking measure provides an important "check-in" to evaluate throughput, emissions, and updated technological advancements. That purpose is not served by the SDEIR.

NRDC DSEIR-41

Further, contrary to the SDEIR's suggestions otherwise, neither LM AQ-22 (Periodic Review of New Technology Regulations) nor LM AQ-1 (Cleanest Available Cargo Handling Equipment) are adequate substitutes for the throughput tracking measure. LM AQ-1 is limited to cargo handling equipment and so, no other sources will be cleaned up through that measure, SDEIR at 2-22. That lease measure also suffers from its own defects. *Supra* at 50. And while LM AQ-22 requires review and potential implementation of new technologies, those requirements occur less frequently than under the throughput tracking measure and appear subject to cost sharing by the Port. FEIR at 66 (requiring review and possible implementation of new technologies upon lease amendment, facility modification, or once every 7 years).

Given the Port's history of noncompliance with mitigation measures, and the fact that throughput projections have exceeded the projections in the 2008 EIR, this measure should be retained. It should, however, be amended to reflect annual evaluations, and be compared to emissions analysis contained in the SDEIR (subject to the recommended revisions noted in this letter) as opposed to the 2008 EIR/EIS.

IV. ADDITIONAL MITIGATION MEASURES ARE AVAILABLE TO REDUCE THE PROJECT'S SIGNIFICANT OPERATIONAL EMISSIONS

NRDC DSEIR-42

Even with its deficient air quality analysis, the SDEIR concludes that the Revised Project will result in significant air quality impacts, including significant ambient concentrations of PM10 (annual average) in 2030, 2036, and 2045; and significant cancer risk for residential, occupational, and sensitive receptors. SDEIR at 3.1-2. As noted above, had the SDEIR's air quality analysis been accurately performed, we believe that the project's significant air quality impacts would be larger in scope and severity.

NRDC DSEIR-42

In any event, the SDEIR's finding of significant impacts, triggers the duty to consider and adopt all feasible mitigation prior to project approval. Cal. Pub. Res. Code §§ 21002; 21061.1. Contrary to CEQA, the SDEIR narrowly revises mitigation for select source categories, and fails to set forth a broader range of strategies could reduce operational emissions. In addition, the SDEIR makes no attempt to consider any measures to offset the excess emissions experienced by the community due to the Port's failure to fully implement the measures in the 2008 EIR. Stated differently, while the SDEIR offers revised measures for the mitigation the Port did not adopt, this fact alone does not demonstrate CEQA compliance. The SDEIR must demonstrate that all feasible mitigation for the project's operational air quality impacts will be adopted. Cal. Pub. Res. Code §§ 21002; 21061.1.

To address these concerns, the SDEIR should analyze *all* feasible mitigation measures that will reduce operational emissions from the Project. This analysis is broader than the SDEIR's narrow re-evaluation of six specific mitigations from the 2008 EIR, and is required under CEQA.

A. Rerouting Cleaner Ships

NRDC DSEIR-43

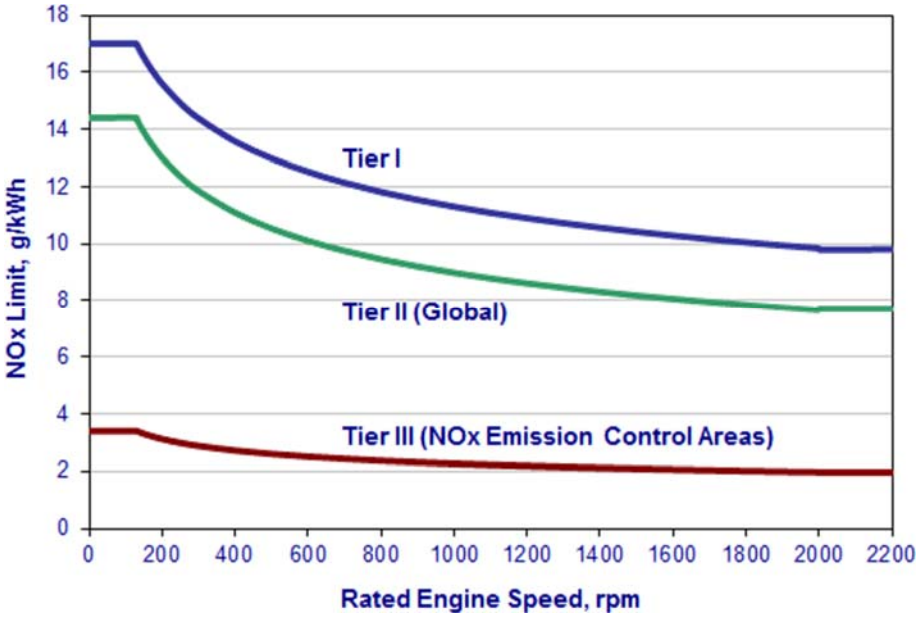
The 2008 EIR included a measure (MM AQ-13) that attracted newer, cleaner vessels to the project. MM AQ-13 stated "When scheduling vessels for service to the Port of Los Angeles, Tenant shall ensure that 75 percent of all ship calls to the Berth 97-109 Terminal meet IMO MARPOL Annex VI NOX emissions limits for Category 3 engines."[145] The SDEIR indicates that the Port is in full compliance with this measure,[146] which encouraged Tier 1 vessels to call at the terminal.

Since the adoption of MM AQ-13, the IMO has established cleaner engine standards for ships that reduce NOx emissions. Tier 2 engines, which were required to be installed on new ships beginning in 2011, are 15% cleaner than the previous generation of engines, and Tier 3 engines, which were available beginning in 2016, are 75% cleaner than Tier 2 vessels.[147] The following diagram depicts the emissions benefits of using Tier 2 and Tier 3 vessels over Tier 1.

[145] FEIR Mitigation and Monitoring Program.
[146] SDEIR at 2-3, Table 2-1 (limiting noncompliance to the 10 mitigation measures and one lease measure identified in Table 2-1).
[147] Draft CAAP Update 2017 at 50.

NRDC DSEIR-43

MARPOL Annex VI NOx emission limits[148]



The SDEIR should consider measures that would encourage the rerouting of Tier 2 and Tier 3 vessels to Berths 97-109 by requiring a certain percentage of such vessels to call at the terminal by a certain date, with increased percentages over time. The Port's ability to successfully implement its previous "rerouting cleaner ships" measure (MM AQ-13) indicates that such measures can and should be considered.

In 2015, 15% of vessel calls to San Pedro Bay were made by Tier 2 ships, and were mostly larger container vessels.[149] And in 2025, due to forecasted fleet turnover, the Port projects that 30% of total vessels calls will be by container vessels that meet Tier 2 standards.[150] The SDEIR should take such information into account to determine how to accelerate the pace of cleaner ships visiting the China Shipping terminal. The precise percentages and dates in which cleaner ships should be phased-in could be subject to a feasibility assessment in the SDEIR.

Further, while we understand that the Port does not project the first Tier 3 ship to visit the San Pedro Bay Ports until 2026,[151] the Project consists of a 40-year lease that will extend until 2045.[152] Accordingly, the Project's long life provides an opportunity for the Port to encourage Tier 2 *and* Tier 3 ships at the terminal before 2045.

Our recommendation that the SDEIR set forth measures that will require the rerouting cleaner ships to the China Shipping terminal as a method for reducing ship emissions is consistent with

[148] International IMO Marine Engine Regulations, *available at* https://www.dieselnet.com/standards/inter/imo.php (Attachment G5).
[149] Draft CAAP Update 2017 at 51.
[150] *Id.* at 53.
[151] *Id.* at 52.
[152] SDEIR at 2-2.

NRDC DSEIR-43

the direction of the Draft CAAP Update 2017, and recent CARB recommendations.[153] As the Port is aware, ships are the largest source of maritime goods-movement-related NOx emissions, comprising 53% of the San Pedro Bay Ports total NOx emissions in 2015. Of those ship emissions, more than half are associated with ships transiting or maneuvering within approximately 100 nm of the ports.[154] As documented by the diagram above, encouraging cleaner vessels to visit Berths 97-109 would reduce operational emissions, and by significant amounts. For these reasons, the SDEIR should consider how it can encourage cleaner vessels to visit the project. Otherwise, it is leaving unmitigated operational emissions on the table in violation of CEQA.

B. Funding Mitigation Programs

NRDC DSEIR-44

The Port should also consider contributing grant funds to air pollution mitigation programs, including those that could be administered by the Harbor Community Benefit Foundation, and Technology Advancement Program. Such programs could fund, for example, additional air filtration systems and maintenance for existing systems, vegetation buffers for sensitive receptors, or zero emission technologies, and thus "avoid[]," "minimize[e]," "rectify[]," "reduc[e]," and/or "compensate[e]" for the community's long-term exposure to the project's operational emissions. CEQA Guidelines § 15370.

By way of example, to help reduce air quality impacts from the Port of Long Beach's Middle Harbor Project, that port required the project to fund the "Schools and Related Sites Guidelines for the Port of Long Beach Grant Programs and Healthcare and Seniors Facility Program Guidelines for the Port of Long Beach Grant Programs in the amount of $5 million each."[155]

C. Increasing Use of On-Dock Rail

NRDC DSEIR-45

The SDEIR states that "[t]he CS Terminal generates train trips to and from the on-dock rail yard (WBICTF) [West Basin Intermodal Container Transfer Facility]." SDEIR at 3.1-29. Moving goods via on-dock rail can reduce cargo movements by trucks and cargo handling equipment, mitigate associated emissions, and minimize traffic in neighboring communities. The Draft CAAP Update 2017 states that "[o]ver the long term, the Ports will seek to handle 50% of all cargo leaving the port complex by rail. Draft CAAP Update 2017 at 56. We support this goal.

The SDEIR however, indicates that the China Shipping terminal is nowhere near this goal. Table 2-3 indicates that the terminal is utilizing less on-dock rail than predicted in the 2008 EIR, and that the percentage of TEUs moved by on-dock rail are far less than the CAAP's 50% goal.

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[153] Draft CAAP Update 2017 at 51-54; CARB Comments on Everport DEIR at 4 (Attachment E6).
[154] Draft CAAP Update 2017 at 50.
[155] Port of Long Beach Middle Harbor Project FEIR at ES-33 (April 2009) (Attachment C12). Long Beach proposed something similar for its proposed (but not adopted) Pier S Project. Port of Long Beach Pier S Project FEIR at ES-35–36 (November 2012) (Attachment C15).

NRDC DSEIR-45

Below is a reproduction of Table 2-3 in the SDEIR, with the percentage of on-dock rail use highlighted in red.

Table 2-3: Comparison of Operation of the CS Container Terminal as Analyzed in the 2008 EIS/EIR and the SEIR.

Element	2008 Assumptions			SEIR Assumptions			
Year:	2015	2030	2045	2014 (Actual)	2023	2030	2036-2045
Throughput (TEUs)	1,164,00	1,551,000	1,551,000	1,089,000	1,521,228	1,698,504	1,698,504
Vessel Calls/yr	182	234	234	82	156	156	156
Truck Trips/yr	1,192,000	1,508,000	1,508,000	1,109,873	1,348,380	1,501,817	1,514,062
Train Trips/yr	648	816	816	570	703	723	738
%TEUs by Truck	81%	83%	83%	81%	85%	86%	86%
%TEUs by On-Dock	20%	17%	17%	19%	16%	14%	14%

Notes:
1) Analysis years differ because 2015 was an interim year for the 2008 EIS/EIR but 2014 is the baseline year for the SEIR.
2) %TEUs by Truck includes trips to near-dock/off-dock railyards.

The SDEIR should set forth—as a lease measure—that at least 50% of all cargo handled at the China Shipping terminal utilize on-dock rail. Given the terminal's access to on-dock rail facilities, the Port's larger on-dock rail goals, and CEQA's mandate that all feasible mitigation be considered and adopted for significant impacts, the SDEIR must consider on-dock rail as a mitigation measure.

NRDC DSEIR-46

D. Accelerating the Turn-Over of Harbor Craft

The SDEIR estimates that two tugboats will assist each arrival/departure of a container ship. SDEIR at 3.1-28. The SDEIR predicts 156 vessel calls per year in 2030. SDEIR at 2-12. This will generate 624 tugboat assists (4 tugboats x156 vessel calls). The SDEIR does not consider any measures for this emission source.

NRDC DSEIR

NRDC DSEIR-46

At a minimum, the SDEIR should analyze the measures that the Port is already analyzing in the Draft CAAP Update 2017 for harbor craft, and consider how such measures can be adopted at the China Shipping terminal.[156] The Draft CAAP states:

> To stimulate the identification, demonstration, and validation of technologies that can achieve emissions reductions from harbor craft beyond current state and federal regulation, the Ports will seek proposals for harbor craft technologies that have the potential to achieve NOx and DPM emission levels cleaner than Tier 4 standards, or technologies that can be retrofitted to existing harbor craft to achieve Tier 3 or Tier 4 emission levels through the following action:
>
> - Issue a Request for Proposals for harbor craft emission-reduction technologies by December 2017 with demonstrations to begin no later than mid-2018.
>
> . . . Additionally, the Ports propose the following strategies to reduce harbor craft emissions and fuel consumption:
>
> - Provide incentives for harbor craft operators to upgrade to the cleanest available (i.e. Tier 4) engines or low-emission hybrid systems in the short term, and to upgrade with advanced technologies (e.g. fuel cells and alternative fuels) in the long term. Incentives could be given through securing grants from federal, state or local agencies, a formal incentive program with financial rewards, or through more favorable lease terms, where applicable, for harbor craft operators that have cleaner fleets.
> - Identify operational changes that could reduce emissions, for example, by reducing the wait time or slow speed movements of assist tugboats while they are waiting to assist a vessel or by optimizing tugboat berth locations to minimize unnecessary travel.
> - As leases with harbor craft operators are opened or renegotiated, the Ports will assess whether it is possible to include requirements for harbor craft modernization, subject to the requisite negotiation process. Many harbor craft companies operate on private land and do not have leases with the Ports; however, the Ports will seek opportunities as they arise.

Accordingly, for example, the Port should consider issuing an RFP for harbor craft technologies that have the potential to achieve NOx and DPM emission levels cleaner than Tier 4 standards, and that can be dedicated to (or substantially serve) the China Shipping terminal. The SDEIR should also consider a measure that would offer incentives to harbor craft operators that serve the China Shipping terminal to upgrade to the cleanest available (i.e. Tier 4) engines or low-emission hybrid systems in the short term, and incentives to upgrade with advanced technologies (e.g. fuel cells and alternative fuels) in the long term.

[156] Draft CAAP Update 2017 at 55.

E. Accelerating the Turn-Over of Locomotives

NRDC DSEIR-47

The SDEIR indicates that "[t]he CS Terminal generates train trips to and from the on-dock rail yard (WBICTF) as well as near- and off-dock rail yards." SDEIR at 3.1-29. Further, "[e]missions associated with hauling containers by rail include diesel exhaust from PHL locomotives performing switching activities at the on-dock rail yard, Class 1 switch locomotives performing switching activities at the near- and off-dock rail yards, and line-haul locomotive emissions used during transport within the SCAB and idling at the rail yards. SDEIR at 3.1-29–3.1-30.

The 2008 FEIR included MM AQ-18 to reduce locomotive emissions, which required, "[b]eginning January 1, 2015, all yard locomotives at Berth 121-131 Rail Yard that handle containers moving through the Berth 97-109 terminal shall be equipped with a diesel particulate filter (DPF)." Mitigation Monitoring and Reporting Program at 2-18. The FEIR committed to incorporating the measure into PHL's (Pacific Harbor Line) lease. *Id.*

Despite the SDEIR's recognition that locomotives contribute to the project's operational emissions, and Port's history in reducing such emissions from the project (the SDEIR does not take the position that MM AQ-18 is infeasible),[157] the SDEIR does not consider any new mitigation for locomotives.

The SDEIR indicates that "the active PHL switcher locomotive fleet in 2014 consisted of a combination of Tier 3-plus and genset locomotives, and were assumed to be converted to Tier 4 locomotives in future years on a 30 year or 15-year repower schedule, respectively." SDEIR at 3.1-30. The SDEIR should consider and set forth a mitigation measure that would accelerate the turnover of PHL's switcher locomotives that handle containers moving through Berths 97-100, so that conversion to Tier 4 locomotives happens sooner than 15 to 30 years from now. The Port's previous success in ensuring PHL's locomotives were equipped with DPFs demonstrates the Ports ability to work with other lease holders to secure emissions reductions from the project.

NRDC DSEIR-48

The SDEIR should also consider measures to reduce emissions from line-haul emissions. The SDEIR states that the San Pedro Bay Ports Clean Air Action Plan has a goal of ensuring all Class 1 locomotives entering the ports meet emissions equivalent to Tier 3 locomotives by 2023. SDEIR at 3.1-24. The SDEIR should discuss how the Revised Project is consistent with that goal, explain how the Port is working with the railroads to achieve those reductions, and consider ways to, for instance, incentivize or require the use of cleaner locomotive technologies through lease agreements as rail use increases at the China Shipping terminal.[158]

F. The SDEIR Should Consider "Smart" Logistic Systems

NRDC DSEIR-49

In addition to reducing tailpipe or smokestack emissions to reduce operational emissions, the project can also enhance operational efficiencies to reduce air pollution. The SDEIR should

[157] *But see supra* 21 (raising concerns over whether the Port complied with MMAQ-18).
[158] *See* CARB, Technology Assessment: Freight Locomotives (Nov. 2016), *available at* https://www.arb.ca.gov/msprog/tech/techreport/final_rail_tech_assessment_11282016.pdf (containing information about cleaner locomotive technologies) (Attachment E11).

NRDC DSEIR-49

consider smart logistics systems, including but not limited to the Freight Advanced Traveler Information System (FRATIS), which is an intelligent transportation system that analyzes data from multiple sources to propose the most efficient routes, and schedules for drivers, dispatchers and cargo owners.

We understand that the Port is currently planning to conduct a demonstration project using FRATIS in late 2017. Draft CAAP Update 2017 at 61. The SDEIR should discuss the results of this demonstration project, and consider incorporating FRATIS or other measures to enhance operational efficiencies and reduce emissions. *See* EPA Comments on Everport DEIR (June 5, 2017) (Attachment E7). Relatedly, the SDEIR should evaluate the intelligent logistics systems employed at the Port of Long Beach Middle Harbor Project and at the Port's own Trapac terminal, and consider how such system can be used at the China Shipping terminal.

G. Additional Measures

NRDC DSEIR-50

In addition to the measures described above, the SDEIR should consider whether there are additional measures that can be adopted to reduce the Project's air quality impacts, including but not limited to measures that reduce emissions generated by refrigerated shipping containers, including methods for plugging such containers into power. The SDEIR should also consider if there are additional idling restrictions or enforcement measures that can be applied to reduce idling from trucks locomotives, and harbor craft. *See, e.g.*, Draft CAAP Update 2017 at 44–45. In short, the SDEIR must consider measures that can cut pollution from every emissions source operating at the terminal.

V. THE SDEIR MUST ENHANCE ITS MITIGATION MONITORING AND ENFORCEMENT PROGRAM

NRDC DSEIR-51

The management failures that led to the current China Shipping situation must never recur. Yet, the SDEIR appears to incorporate the same program that proved ineffective in monitoring and enforcing the 2008 mitigation measures.[159] To ensure that mitigations are actually implemented and monitored for compliance, we recommend the following:

1. A full public accounting of why the lease with China Shipping was never amended to include the 2008 measures, and why waivers were granted from AMP. A full understanding of what led to the current predicament is essential to ensuring any future mitigation and monitoring program does not repeat past mistakes.

NRDC DSEIR-52

2. Ongoing public disclosure of the status of all mitigation measures for all past and present Port CEQA projects. A third party—agreeable to the Port and the community—should be selected to oversee this monitoring reporting process. The reporting plan should include, at a minimum:

[159] *Compare* SDEIR at 3.1-66–3.1-68 *with* FEIR Mitigation, Monitoring and Reporting Program at 2-13–2-22. Both mitigation monitoring programs primarily consist of the Port including the mitigations in China Shipping's lease agreement.

NRDC DSEIR-52

- An assessment of mitigation compliance based on on-site visits, interviews, data from the drayage truck registry, and review of equipment and vehicle inventories.

- Throughput tracking to determine if actual throughput exceeds the projections in previously certified EIRs. In years when throughput exceeds projections, an assessment of excess emissions attributable to that throughput should be performed, as well as a plan to deal with those excess emissions.

- Ongoing assessment and implementation of cleaner technologies and practices that can be implemented at the terminals.

NRDC DSEIR-53

3. Creation of a permanent and independent oversight committee, funded to conduct audits of the implementation of all committed mitigation measures, port-wide. The committee could be modeled after the disbanded Port Community Advisory Committee (PCAC). The committee's work should be coordinated with the work of the third-party monitor.

VI. THE SDEIR'S ANALYSIS OF INCREASED GREENHOUSE GAS EMISSIONS IS LEGALLY INADEQUATE AND RELIES ON ILLUSORY MITIGATION MEASURES

NRDC DSEIR-54

Climate change is probably the most significant environmental problem that the United States faces. California has led the nation for years in its efforts to fight climate change, requiring deep cuts in greenhouse gas emissions by 2020 and later. Ignoring this, the SDEIR admits that the revised project will cause an *increase* in greenhouse gas emissions and relies on illusory mitigation measures that, even by the Port's calculation, will not return greenhouse gas emissions to baseline, much less decrease them. This is unconscionable and invalid as a matter of law.

The SDEIR admits that: "Revised Project incremental GHG emissions are 34,591 metric tons of CO2e in the peak year of operations in 2030. They exceed the 10,000 metric 24 ton CO2e significance threshold by 24,591 metric tons."[160] In addition: "The Revised Project would generate GHG emissions, either directly or indirectly, that would exceed the 42 SCAQMD 10,000 mty CO2e threshold in 2023, 2030, 2036 and 2045."[161]

Under California AB 32, enacted in 2006, statewide greenhouse gas emissions must be reduced to 1990 levels by 2020, roughly a 15% reduction from a business as usual scenario.[162] In 2016, the Governor signed SB 32 which requires a reduction in greenhouse gases of 40 percent below 1990 levels by 2030.[163] Increasing greenhouse gases emissions violates both statutes. Even the

[160] SDEIR at 3.2-2.
[161] *Id.*
[162] CARB, Assembly Bill 32 Overview, *available at* https://www.arb.ca.gov/cc/ab32/ab32.htm (last visited Sept. 26, 2017) (Attachment D6).
[163] CARB, AB 32 Scoping Plan, *available at* https://www.arb.ca.gov/cc/scopingplan/scopingplan.htm (last visited Sept. 26, 2017) (Attachment D7).

NRDC DSEIR-54

SDEIR admits that, "for informational purposes," that the Revised Project "would not be consistent with some state and local plans, and policies adopted for the purpose of reducing GHG emissions and climate change impacts." SDEIR at 3.2-2–3.2-3; *see also id.* at 3.2-30–3.2-39.

NRDC DSEIR-55

Moreover, the greenhouse gas analysis in the SDEIR likely underreports past greenhouse gas emissions because it relies on mitigation measures such as AMP and LNG trucks that were not complied with. For example, using AMP at dock reduces fossil fuel combustion in comparison to the fossil fuel burned to generate electricity, but that difference is not captured in a retrospective analysis that (wrongly) assumes full compliance with the AMP requirement. Similarly, LNG trucks typically do not emit greenhouse gases at the same rate that diesel trucks do[164] and that difference is also lost because LNG trucks were not brought into the fleet as required by the 2008 EIR.

NRDC DSEIR-56

Even worse, the proposed mitigation measures in the SDEIR do not come close to meeting the AB 32 or SB 32 requirements. By the Port's calculations, most greenhouse gases in the future will come from off-site trucks, with the next largest portion coming from cargo handling equipment. SDEIR at Table 3.2-1, page 3.2-18, Table 3.2-2, page 3.2-19. Yet the DEIR proposes *no* mitigation for drayage and fails to set forth all feasible measures that would phase in zero emissions cargo handling equipment, *supra* at 30-42. Although LED lighting is good (MM GHG-1), it won't touch the greenhouse gas emissions of port trucking, much less cargo handling equipment and rail.

The only other mitigation measure proposed is establishment of a greenhouse gas mitigation fund (LM GHG-1) paid for by the tenant, China Shipping, even though China Shipping has refused to sign an amended lease incorporating the 2008 EIR mitigations, and has balked at funding any mitigation measures.[165] This brings "illusory" to a new level.

NRDC DSEIR-57

There are real mitigation measures available to the Port such as zero emission trucks and cargo handling equipment, and increased use of AMP, as we have detailed in our comments above, and that are in the draft Clean Air Action Plan. *See, e.g.*, Draft CAAP Update 2017 at 30–34, 39–45, 46–47. Those measures need to be considered in the SDEIR. In addition, the required energy efficiency analysis under CEQA Guidelines Appendix F (as discussed below) would yield additional mitigation measures that must be considered.

[164] Great care needs to be taken in such an analysis because of the problem of methane leakage in the production of LNG. Methane is an extremely potent greenhouse gas, much more so than CO2. The SDEIR should have, but did not, conduct this analysis.
[165] In fact, China Shipping sued the Port for damages relating to implementation of the ASJ and the Port paid a multi-million dollar settlement. (Attachment A68 at POLA001715).

VII. THE SDEIR FAILS TO COMPLY WITH CEQA GUIDELINES APPENDIX F

NRDC DSEIR-58

The SDEIR contains no analysis of the energy conservation factors required to be included under CEQA Guidelines Appendix F,[166] which provides in part:

> In order to assure that energy implications are considered in project decisions, the California Environmental Quality Act requires that EIRs include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy.

This is important here because additional energy efficiency measures would help mitigate the dismal greenhouse gas emissions situation shown in the SDEIR. Failure to analyze the Appendix F factors can, by itself, invalidate an EIR. *See, e.g., Cal. Clean Energy Comm. v. City of Woodland*, 225 Cal.App.4th 173 (Cal.Ct.App. 2014).

For example, zero emission trucks and cargo handling equipment will, by definition, eliminate most fossil fuel use at the Port and so save energy compared to the lifecycle energy of electricity generation by the L.A. Department of Water and Power with increasing percentages of renewable energy. It may be that LNG trucks save energy compared to diesel, but the SDEIR does not analyze this. The AMP requirement may also save energy in comparison to ships burning marine fuel while at dock—but this is not analyzed either.

Appendix F provides specific guidance on how to analyze these issues that the Port should consider. For example, energy impacts could include:

1. The project's energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project's life cycle including construction, operation, maintenance and/or removal. If appropriate, the energy intensiveness of materials may be discussed.

2. The effects of the project on local and regional energy supplies and on requirements for additional capacity.

3. The effects of the project on peak and base period demands for electricity and other forms of energy.

4. The degree to which the project complies with existing energy standards.

5. The effects of the project on energy resources.

6. The project's projected transportation energy use requirements and its overall use of efficient transportation alternatives.

[166] CEQA Guidelines, App. F, *available at*http://resources.ca.gov/ceqa/guidelines/Appendix_F.html.

NRDC DSEIR-58

Feasible mitigation measures, for example, for the Port's greenhouse gas impacts, may include:

1. Potential measures to reduce wasteful, inefficient and unnecessary consumption of energy during construction, operation, maintenance and/or removal. The discussion should explain why certain measures were incorporated in the project and why other measures were dismissed.

2. The potential siting, orientation, and design to minimize energy consumption, including transportation energy.

3. The potential for reducing peak energy demand.

4. Alternate fuels (particularly renewable ones) or energy systems.

5. Energy conservation which could result from recycling efforts

Critically, in view of the SDEIR's preference of diesel trucks over LNG or zero emission, Appendix F requires that: "Alternatives should be compared in terms of overall energy consumption and in terms of reducing wasteful, inefficient and unnecessary consumption of energy." Similarly, the SDEIR must compare its ongoing reliance on diesel and LPG cargo handling equipment in lieu of phasing in, for example, electric yard hostlers, RTGs, and forklifts. These analyses, which should also consider the greenhouse gas impacts of the project, was not done here, and must be.

THE DISCRETIONARY DECISION BEFORE THE BOARD OF HARBOR COMMISSIONERS

For the reasons stated above, the SDEIR must be revised and recirculated.[167] Once the CEQA document discloses the project's significant effects (including retrospective and prospective impacts), the Board of Harbor Commissioners must adopt all feasible mitigation. This could include enforcing some or all the 2008 EIR's measures, and/or revising the project to add new feasible measures. We have provided a number of technologies the Port should consider, and that are aligned with the City and Port's zero emission goals.

NRDC DSEIR-59

Further, the record shows that China Shipping has no interest in complying with the mitigation measures in the 2008 EIR. And that it has no interest in devising alternate measures or even explaining its noncompliance. Consequently, there is no reason to believe that China Shipping will comply with any revised measures identified in the SDEIR. Additionally, our understanding is that China Shipping, having merged with COSCO, is moving its business to the Port of Long

[167] The Port chose to prepare a *supplement* EIR, which is normally prepared when only minor revisions are needed to make the previous EIR adequate. CEQA Guidelines §15163(a)(2). Given the errors in the SDEIR outlined above, and the Port's recognition that the 2008 EIR is outdated and unreliable, major revisions to the previous EIR are needed to ensure that the project's impacts have been fully disclosed and mitigated in compliance with CEQA. Accordingly, the Board should consider whether a revised, subsequent, or some other form of EIR is required under these circumstances.

NRDC DSEIR-59

NRDC DSEIR-60

NRDC DSEIR-61

Beach. The opportunity exists to negotiate a termination of the Port's lease with China Shipping—or force a termination based on noncompliance—and lease the site to an entity that is committed to zero emission technology and additional on-dock rail.

Thus, faced with the errors in the SDEIR, and the current operations at the terminal, we recommend that the Board:

1. Revise the SDEIR to ensure the project's impacts are assessed and mitigated; and

2. Terminate the lease with China Shipping and find a tenant that can comply with CEQA, and partner with the City in fulfilling its zero emission goals.

Absent these steps, we cannot reconcile how the Port will comply with CEQA or meet its project objectives to grow the terminal sustainably.

Sincerely,

Melissa Lin Perrella,
Natural Resources Defense Council

David Pettit
Natural Resources Defense Council

Taylor Thomas,
East Yard Communities for Environmental Justice

Kathleen Woodfield
Dr. John G. Miller, MD,
San Pedro and Peninsula Homeowners Coalition

Joe Lyou
Nidia Erceg,
Coalition for Clean Air

Sylvia Betancourt,
Long Beach Alliance for Children with Asthma

Chuck Hart
San Pedro Peninsula Homeowners United

Angelo Logan
Urban and Environmental Policy Institute, Occidental College

Enclosures:

- Index of documents supporting NRDC's comments on the SDEIR
- Flash drive containing all documents cited in the index

cc: Los Angeles Mayor Eric Garcetti
City of Los Angeles Chief Sustainability Officer Lauren Faber O'Conner
Los Angeles Councilmember Joe Buscaino
Lieutenant Governor and State Lands Commissioner Gavin Newsom
State Controller and State Lands Commissioner Betty T. Yee
Finance Director and State Lands Commissioner Michael Cohen
Deputy Controller for Environmental Policy Anne Baker
Members, Port of Los Angeles Board of Harbor Commissioners
Eugene Seroka, Executive Director, Port of Los Angeles
Wayne Nastri, Executive Officer, South Coast Air Quality Management District

Index of Attachments in Support of NRDC, et al.'s Comments on the SDEIR for the China Shipping Project (9/29/17)

A - Public Records Act Documents

B - China Shipping Litigation and Related Documents

C - San Pedro Bay Port Studies and Assessments

D - City and State Documents

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F - Academic and Other Independent Studies

G - Rules, Regulations, and Resolutions

H - Miscellaneous Press Statements and News Articles

I - Sonoma Technology, Inc Report and References

J - Press Statements and Data from Technology Manufacturers

From:	Manzo, Mariela
To:	Ceqacomments; Cannon, Chris
Cc:	"mayor.garcetti@lacity.org"; lauren.faber@lacity.org; councilmember.buscaino@lacity.org; gavin.newsom@lgt.ca.gov; abaker@sco.ca.gov; Commissioners; Seroka, Gene; wnastri@aqmd.gov; LinPerrella, Melissa; Pettit, David; Wyenn, Morgan
Subject:	NRDC Comment Letter re: Draft Supplemental Environmental Impact Report – Berths 97-109 [China Shipping]
Date:	Friday, September 29, 2017 2:01:18 PM
Attachments:	China Shipping SDEIR comment letter FINAL with Index.pdf

Dear Mr. Cannon,

On behalf of the Natural Resources Defense Council, San Pedro and Peninsula Homeowners' Coalition, San Pedro Peninsula Homeowners United, Coalition for Clean Air, East Yard Communities for Environmental Justice, Long Beach Alliance for Children with Asthma, Urban & Environmental Policy Institute, Occidental College attached please find:

(1) Written comments on the Draft Supplemental EIR for Berths 97-109, China Shipping Container Terminal (SDEIR); and
(2) A drop box link containing documents supporting our written comments:
https://www.dropbox.com/sh/mzqilzk1q8lfwmm/AAAqi8o3xjx-QSbp2Wcj63T5a?dl=0

We are also hand-delivering a hard copy version of our written comments along with a flash drive containing the same documents within the drop box link. Please note that the drop box link should be "live" for the foreseeable future but may become unusable on some future date. Thus, we would recommend relying on the flash drive to retrieve our documents.

Regards,

MARIELA MANZO
Program Assistant

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Please save paper.
Think before printing.

Response to Comment NRDC DSEIR-1

This comment refers to material presented in the previous Draft SEIR for the Revised Project (the DSEIR). The entire DSEIR has been revised and recirculated as the Recirculated DSEIR, and LAHD has required that reviewers submit new comments on the Recirculated DSEIR. Accordingly, comments on the DSEIR remain part of the administrative record but need not be included or responded to in the Final SEIR (CEQA Guidelines section 15088.5(f)(1). Subsequent comments presenting specific concerns are responded to below.

Response to Comment NRDC DSEIR-2

The LAHD disagrees that 2000-2001 is the appropriate baseline. Please see Responses to Comments NRDC-6 and NRDC-7. Please note also that the Recirculated DSEIR's baseline was changed to 2008. With respect to non-compliance in previous years, please see Master Response 4: Non-Compliance with the Original FEIR Mitigation Measures.

The commenter is incorrect in asserting that the original China Shipping Container Terminal Project approved in 2008 and the proposed Revised Project together constitute "the whole of the action" whose impacts are required to be evaluated in this SEIR. As explained in Response to Comment NRDC-6, under CEQA the purpose of a supplemental EIR is limited to determining whether proposed changes to a previously reviewed project result in environmental impacts that were not already and previously analyzed in a prior EIR. (Public Resources Code § 21166.) As further explained in Response to Comment NRDC-7, *POET II* does not concern supplemental environmental review under CEQA, and does not change the limitations placed by CEQA on the scope of supplemental environmental review.

Comments regarding the content of Appendix D refer to material presented in the 2017 DSEIR, which is not replicated in the Recirculated DSEIR. Accordingly, comments on Appendix D do not require a written response. With respect to MM AQ-20 (LNG trucks), please see Response to Comment NRDC-35.

Response to Comment NRDC DSEIR-3

The first two paragraphs of this comment refer to material presented in a previous draft (the 2017 DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, that portion of the comment does not require a written response.

The human health-related effects of emissions associated with the Revised Project are disclosed and evaluated in full compliance with CEQA in Section 3.1 of the Recirculated DSEIR, which has been augmented with additional disclosures in Section 3.1 of the Final SEIR.

Response to Comment NRDC DSEIR-4

Please see Response to Comment NRDC-7 for a discussion of the requirements of the relationship of the *POET II* case to the Revised Project and its CEQA documentation.

Response to Comment NRDC DSEIR-5

Regarding Appendix D, this comment refers to material presented in a previous draft (the 2017 DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable.

Regarding the comments on EMFAC2014 model, LAHD considers CARB's models to be the most appropriate tool to estimate on-road and off-road emissions for California

sources. The commenter does not provide alternative equivalent models that improve on EMFAC methodology. Please note that EMFAC2014 emissions have been replaced in the Recirculated DSEIR with those in the latest version (EMFAC2017).

Response to Comment NRDC DSEIR-6

Please see Response to Comment NRDC-15.

Response to Comment NRDC DSEIR-7

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable.

Response to Comment NRDC DSEIR-8

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable.

Response to Comment NRDC DSEIR-9

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable.

Response to Comment NRDC DSEIR-10

Please see Response to Comment SCAQMD-28.

Response to Comment NRDC DSEIR-11

The Draft SEIR's wording was unclear on the status of PHL's switcher locomotives that service the CS Terminal. In fact, PHL operates both Tier 3+ units equipped with DPFs and Genset switchers with off-road engines that meet or exceed the emissions factors of DPFs. Accordingly, the LAHD determined that MM AQ-18 had been complied with and did not need to be included in the Revised Project.

Response to Comment NRDC DSEIR-12

The DSEIR was prepared using the level of technical detail appropriate to the complex, highly technical issues being analyzed, and follows LAHD's CEQA protocol, as was the Recirculated DSEIR which supersedes the DSEIR. Comments regarding the content of Appendix D refer to material presented in the DSEIR which is not replicated in the Recirculated DSEIR. Accordingly, comments on Appendix D do not require a written response.

Response to Comment NRDC DSEIR-13

Please see Response to Comment NRDC-20.

Response to Comment NRDC DSEIR-14

Please see Response to Comment NRDC-21.

Response to Comment NRDC DSEIR-15

Please see Response to Comment NRDC-22.

Response to Comment NRDC DSEIR-16

Please see Response to Comment NRDC-23.

Response to Comment NRDC DSEIR-17

Please see Response to Comment NRDC-23.

Response to Comment NRDC DSEIR-18

Please see Response to Comment NRDC-23.

Response to Comment NRDC DSEIR-19

Please see Response to Comment NRDC-24.

Response to Comment NRDC DSEIR-20

Please see Response to Comment NRDC-25.

Response to Comment NRDC DSEIR-21

Please See Responses to Comments NRDC-26 and NRDC-27.

Response to Comment NRDC DSEIR-22

Please see Response to Comment NRDC-28.

Response to Comment NRDC DSEIR-23

Please see Response to Comment NRDC-29.

Response to Comment NRDC DSEIR-24

Please see Response to Comment NRDC-29.

Response to Comment NRDC DSEIR-25

Please see Response to Comment NRDC-29.

Response to Comment NRDC DSEIR-26

Please see Response to Comment NRDC-29.

Response to Comment NRDC DSEIR-27

Please see Response to Comment NRDC-30.

Response to Comment NRDC DSEIR-28

Please see Response to Comment NRDC-31.

Response to Comment NRDC DSEIR-29

Please see Response to Comment NRDC-32.

Response to Comment NRDC DSEIR-30

Please see Response to Comment NRDC-32.

Response to Comment NRDC DSEIR -31

Please see Response to Comment NRDC-33.

Response to Comment NRDC DSEIR-32

Please see Response to Comment NRDC-33.

Response to Comment NRDC DSEIR-33

Please see Response to Comment NRDC-34.

Response to Comment NRDC DSEIR-34

Please see Response to Comment NRDC-35.

Response to Comment NRDC DSEIR-35

Please see Response to Comment NRDC-36.

Response to Comment NRDC DSEIR-36

Please see Response to Comment NRDC-36.

Response to Comment NRDC DSEIR-37

This comment incorrectly asserts that the LAHD relies on SB 1 (codified as California Health and Safety Code section 43021) as a "rationale for giving up on clean trucks at China Shipping." The Recirculated DSEIR explains its reasons for not including 2008 MM AQ-20 in the Revised Project in section 2.5.2, "Revised Project Elements." That discussion explains that the basis for eliminating MM AQ-20 lies in three basic types of constraints – industry, truck technology, and financial constraints – and does not rely on, or even mention, SB 1 or H&S Code section 43201 as a basis for not including 2008 MM AQ-20 in the Revised Project. Rather, Section 3.1 of Recirculated DSEIR discusses SB-1 as one of the "State Regulations and Agreements" that together form the regulatory background for analysis of the air quality impacts of the Revised Project.

The discussion in section 3.1 notes that SB-1 is a recently enacted law, that "the full effect of Section 43201 is not known at the time of this Draft SEIR," that the new law "may complicate the ability of LAHD to require retirement, replacement, or retrofitting of drayage trucks in advance of CARB regulations adopted in accordance with SB-1," and that LAHD has been in discussions with CARB about the law and will continue to work cooperatively with CARB in pursuit of shared goals. Because the legal questions about SB-1 discussed in Recirculated DSEIR section 3.1 do not play any role in the LAHD's determination that 2008 MM AQ-20 is infeasible and cannot be included in the Revised Project, CEQA does not require that those legal questions be resolved in this SEIR.

Response to Comment NRDC DSEIR-38

Please see Response to Comment NRDC-37.

Response to Comment NRDC DSEIR-39

Please see Response to Comment NRDC-38.

Response to Comment NRDC DSEIR-40

Please see Response to Comment NRDC-39.

Response to Comment NRDC DSEIR-41

Please see Response to Comment NRDC-39. The LAHD disagrees with the comment's characterization of LM AQ-22 as requiring technology review at a lower frequency than LM AQ-23 would have required under the throughput tracking requirement. LM AQ-23 was keyed to the future horizon years of 2010, 2015, 2030, and 2045, meaning that as much as 15 years could pass between throughput checks required by the measure. LM AQ-22, by contrast, required the tenant to "implement not less frequently than once every 7 years following the effective date of the permit, new air quality technological advancements…" and "to review…new emissions technology… at the time of the Port's consideration of any lease amendment or facility modification for the Berth 97-109

property." Accordingly, technology reviews would certainly happen no less frequently, and likely more frequently, under LM AQ-22 than under LM AQ-23. LM AQ-1 supplements LM AQ-22 by ensuring a more frequent review cycle (annually) for a class of sources for which technology can be expected to develop more quickly than for vessels, i.e., cargo-handling equipment. The LAHD concludes that together these two measures are an adequate replacement for LM AQ-23.

Response to Comment NRDC DSEIR-42

Please see Response to Comment NRDC-40.

Response to Comment NRDC DSEIR-43

Please see Response to Comment NRDC-41.

Response to Comment NRDC DSEIR-44

Please see Response to Comment NRDC-42.

Response to Comment NRDC DSEIR-45

Please see Response to Comment NRDC-43.

Response to Comment NRDC DSEIR-46

Please see Response to Comment NRDC-44.

Response to Comment NRDC DSEIR-47

Please see Response to Comment NRDC-45.

Response to Comment NRDC DSEIR -48

Please see Response to Comment NRDC-45.

Response to Comment NRDC DSEIR-49

Please see Response to Comment NRDC-46.

Response to Comment NRDC DSEIR-50

Please see Response to Comment NRDC-47.

Response to Comment NRDC DSEIR-51

Please see Response to Comment NRDC-48.

Response to Comment NRDC DSEIR-52

Please see Response to Comment NRDC-48.

Response to Comment NRDC DSEIR-53

Please see Response to Comment NRDC-48.

Response to Comment NRDC DSEIR-54

The Recirculated DSEIR contains a revised GHG analysis such that the figures cited in the comment are no longer relevant, but the Recirculated DSEIR concludes, for informational purposes, that the Revised Project would likely not be consistent with some plans and programs related to greenhouse gas emissions. Greenhouse gas emissions from rail activity associated with the Revised Project are analyzed in compliance with CEQA in section 3.2 of the Recirculated DSEIR. Those emissions do not violate AB 32 or SB 32, which concern regulation of greenhouse gases at the statewide level, and do not apply directly to the Revised Project.

Response to Comment NRDC DSEIR-55

See Response to Comment NRDC DSEIR-54. The GHG analysis has been revised in the Recirculated DSEIR.

Response to Comment NRDC DSEIR-56

Please see Responses to Comments NRDC-27 through NRDC-32, NRDC-34 through NRDC-37, and NRDC DSEIR-54, and Master Response 2: Zero- and Near-Zero-Emission Technologies.

Response to Comment NRDC DSEIR-57

Please see Responses to Comments NRDC-27 through NRDC-32, NRDC-34 through NRDC-37, and NRDC-49, Master Comment 2: Zero Emission Technologies, and Master Comment 3: Port-Wide Emission Reduction Programs.

Response to Comment NRDC DSEIR-58

Please see Response to Comment NRDC-50.

Response to Comment NRDC DSEIR-59

Please see Response to Comment NRDC-51.

Response to Comment NRDC DSEIR-60

Please see Response to Comment NRDC-51.

Response to Comment NRDC DSEIR-61

Please see Response to Comment NRDC-52.

2.3.2.10 NRDC Attachment I1 to 2017 Letter

Sonoma Technology, Inc.
Innovative Environmental Solutions

Technical Memorandum
Attorney-Client Work Product

September 26, 2017 STI-917041

To: Melissa LinPerrella and David Pettit, Natural Resources Defense Council

From: Lyle R. Chinkin, Chief Scientist and President Emeritus

Re: Technical Review of Draft Supplemental Environmental Impact Report (DSEIR), China Shipping Container Terminal Project (dated June 2017)

Summary of Findings and Recommendations

In the **Draft Supplemental Environmental Impact Report** (the 2017 DSEIR), Los Angeles Harbor Department (LAHD) admits having failed to implement some of the air quality mitigation measures that were requisite to its permit to construct the China Shipping (CS) Container Terminal; and proposes a revised mitigation plan which further delays, relaxes, or in some cases neglect implementation of the requisite mitigation measures altogether. I reviewed the emission-related information presented in the 2017 DSEIR and arrived at some findings and recommendations organized around 3 key issues or questions:

1. what can be understood about the CS Container Terminal's emissions as reported or implied by the 2017 DSEIR;
2. is any key information missing or technically insufficient; and
3. what should be done to address missing or insufficient information?

Only once these insufficiencies have been addressed can one attain a meaningful understanding of the air quality impacts that have been caused by LAHD's failure to implement the approved plan, as well as the future impacts that can be expected to occur under the LAHD's revised and relaxed mitigation plan. I briefly summarize my findings and recommendations as follows.

What can be understood about CS Container Terminal's emissions from the 2017 DSEIR?

NRDC.I1-1

Failure to implement <u>all</u> of the previously approved mitigation measures has resulted in significant excess emissions of air pollutants and exposure to these emissions in the community surrounding the Port of LA. Excess emissions are the mass of air pollutants above and beyond the emissions that

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NRDC.I1-1

should have been emitted had the mitigation plan from the 2008 EIR been followed as approved. Excess emissions and exposures began to occur in 2005 (the first year that mitigation goals were missed), are ongoing at significant levels through today, and are expected to continue beyond 2025 to a lesser extent (after the relaxed mitigation schedule presented in the 2017 DSEIR begins to approach the approved schedule[1]).

NRDC.I1-2

Information included in the 2017 DSEIR represents an acknowledgement by LAHD that significant excess emissions are occurring. The 2017 DSEIR indicates that 0.6 tons of excess peak daily NO_x emissions were emitted in 2014 (i.e., the difference between 9396 lb/day and 8193 lb/day after conversion to tons) (figures quoted from Table 3.1-5, page 3.1-37 of the DSEIR). This excess 0.6 tons NO_x—which is equal to about 1200 lbs NO_x—is far above the significance threshold for action (only 55 lbs NO_x) set by the South Coast Air Quality Management District (SCAQMD). Other excess peak-day pollutant emissions indicated in the 2017 DSEIR include $PM_{2.5}$ (18 lb/day), PM_{10} (20 lb/day), VOC (29 lb/day), and SO_x (13 lb/day).

Is key information missing or technically insufficient?

NRDC.I1-3

The excess emissions are even greater than LAHD has represented in the 2017 DSEIR. The air quality sections of the DSEIR contained contradictory, unsubstantiated, and inconsistent statements, assumptions, and calculations—the effects of which are to understate the past actual and future expected emissions from the CS Container Terminal. Scientific and technical flaws uncovered by my review are discussed in detail beginning from page 4 of this memorandum. Stated very briefly, NO_x and $PM_{2.5}$ emission factors for heavy-duty LNG trucks are implausible when judged against published literature; the benefits that could be gained by implementation of AMP for ship hoteling appear to be greatly underestimated; and the choice of year 2014 to represent the so-called "baseline" is unjustified and results in a lowered estimate of excess emissions. These issues combine to minimize the differences between the relaxed mitigation plan proposed in the 2017 DSEIR, the approved plan, and the baseline scenario.

NRDC.I1-4

The authors of the 2017 DSEIR omit key information, obscuring precisely how much excess pollution has been emitted (or is expected) at the CS Container Terminal during 2005-2025 (with the exception of year 2014).[2] This period from 2005-2025 is a critical period for review. It is the window of time when approved mitigation measures were scheduled to gradually phase in (but didn't). Although the

[1] The approved schedule is represented in the 2008 Environmental Impact Report (EIR) (Los Angeles Harbor Department, 2008).

[2] My review of the 2017 DSEIR included the appendices (e.g., Appendices B and D), which also omit the key information needed to determine excess emissions during 2005-2025 (excepting 2014). Emissions reported in Appendix D, Tables 2-7, were estimated using out-of-date emissions models, which render them unsuitable for determining the excess emissions.

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NRDC.I1-4

precise quantities of excess pollutants emitted during this period cannot be determined from the 2017 DSEIR alone, excess emissions clearly occurred. These excesses have caused the community near the Port of LA to be exposed to levels of pollutants above those that were agreed to when the mitigation plan represented by the 2008 EIR was approved.

What should be done to address missing or insufficient information?

NRDC.I1-5

Given the information gaps and technical insufficiencies, one cannot meaningfully evaluate LAHD's proposed mitigation plan revisions—not without a fuller understanding of the past and expected impacts that were and/or will be caused by delayed, relaxed, or avoided mitigation measures. LAHD should be required to develop further information and remedy technical deficiencies in the 2017 DSEIR emission inventories before submitting another air quality mitigation plan for review and consideration.

NRDC.I1-6

- The emissions inventories in the 2017 DSEIR, such as those shown in Tables 3.1-9, should be expanded to include the period 2005-2021 and 2025 with supporting information provided in appendices.

NRDC.I1-7

- Technical issues discussed in detail beginning on page 4 of this memorandum should be addressed.

NRDC.I1-8

- Given the extent of the technical issues I have identified, a comprehensive technical quality review should be completed to ensure that no further significant technical issues remain unidentified and/or unresolved. I acknowledge that my review (discussed in this memorandum), focused exclusively on the emissions sources with the greatest expected emissions quantities and/or emissions reductions from approved mitigation measures. A comprehensive review would build upon and extend this work.

NRDC.I1-9

- Concerning selection of the baseline year, a ***supplemental*** EIR should rely on the same baseline year and baseline scenario as the original EIR, which in this case would be 2001 and "no-build". Meanwhile, the 2014 so-called baseline scenario—put forth in the 2017 DSEIR—represents elevated emissions levels greater than a 2001 "no-build" scenario, which effectively minimizes the differences when various mitigation scenarios are compared to a baseline. The proposed baseline appears to represent ***actual*** 2014 emissions (not 2001 no-build emissions), including emissions from the operations of the CS Container Terminal during that year. It would be far more justifiable to update the 2001 "no-build" scenario with the latest information and models and use that inventory as a basis of baseline comparison.

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Information Gaps and Technical Deficiencies affecting the 2017 DSEIR Emission Inventories

The air quality sections of the DSEIR contained important unsubstantiated statements, assumptions, and calculations. A few particularly problematic statements and conclusions in the 2017 DSEIR are stated as follows.

NRDC.I1-10

- The 2017 DSEIR failed to provide a basis for concluding that for 2023 through 2045, the proposed revised implementation plan will be emissions-equivalent to full implementation of mitigation measures as approved in the 2008 EIR. This flawed conclusion is not supportable; the NO_x and PM emission factors assumed in the 2017 DSEIR for heavy duty trucks were found to be contrary to published literature and were not properly justified. (See discussion beginning on page 9.) STI's independently estimated emissions from heavy-duty trucks for the same time period and conditions are substantially different from those in the 2017 DSEIR.

NRDC.I1-11

- The 2017 DSEIR appears to inconsistently represent the future-year emissions benefits that would have been gained if alternative maritime power (AMP) for vessel hoteling had been implemented as approved. (See discussion beginning on page 12; and compare Figures 8-9 to Figures 10-11.)

NRDC.I1-12

- An inconsistency was found in the 2008 EIR itself when comparing the approved mitigation scenario to the unmitigated scenario. For example, the 2010 NO_x emissions from cargo handling equipment associated with the approved mitigation scenario were actually higher than those for the unmitigated scenario (when clearly the opposite is expected). If the 2008 EIR is selected to be used as a reference to compare scenarios in the future, then further investigation and validation of the 2008 emissions estimates is warranted. (See discussion beginning on page 17 and Figure 12.)

The remainder of this document discusses and further illustrates these findings and other comments on the 2017 DSEIR.

Supporting Narratives and Details concerning Information Gaps and Technical Deficiencies affecting the 2017 DSEIR Emission Inventories

Project-Wide Emission Inventories

NRDC.I1-13

Project-wide annual emissions estimates for various years and mitigation scenarios were excerpted as available from the 2008 EIR and 2017 DSEIR and are plotted side-by-side to facilitate comparisons. (**Figures 1 and 2** are examples for NOx and $PM_{2.5}$). All years of interest are included on the plots, whether or not the emissions estimates were presented in the 2017 DSEIR. The extent of the information omitted from the 2017 DSEIR is apparent from the amount of blank space in the figures. Ideally, at least one pair of gray bars representing both (a) the fully mitigated scenario and (b) the proposed revised mitigation scenario would appear for each year of interest. However, only future years 2023, 2030, and 2045 are represented in this manner by the 2017 DSEIR. Further years of interest include most years from 2005-

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NRDC.I1-13

2025 and the original baseline year, 2001. These years collectively represent: (1) years when approved mitigation measures failed to be implemented; (2) alternative proposed baseline years; and (3) years in which the 2017 DSEIR identifies a potential to exceed a SCAQMD threshold of significance. The following observations can be drawn from a review of Figures 1 and 2.

- First, one must acknowledge that for the 2017 DSEIR, emission inventories were prepared by using the most up-to-date information and models currently available, such as actual activity data for the port, updated projections of future port activities, and the latest available emissions models (e.g., EMFAC 2014).[3] **Using updated information and models significantly affected the estimated emissions** for recent and future years. For example, Figure 1 illustrates a 21% difference in the expected peak daily NO_x emissions for year 2030. (Compare "□2008 EIR; Fully Mitigated Scenario" to "■2017 DSEIR; Fully Mitigated Scenario".) These types of differences are to be expected; however, they complicate or even obscure meaningful comparisons between the 2008 EIR and the 2017 DSEIR. It is critical to re-generate the 2001 original baseline inventory using the updated information and models so that appropriate direct comparisons can be made.

NRDC.I1-14

- The 2008 EIR showed that, at the time of its writing, **approved mitigation measures were expected to produce significant emissions benefits** by 2015 and in future years. For example, a 70% reduction in the peak daily 2015 NO_x emissions was expected relative to the unmitigated scenario. (Compare "2008 EIR; Fully Mitigated Scenario □" to "2008 EIR; Unmitigated Scenario □" for 2015—i.e., 18,933 versus 5,663 lbs NO_x/day.) $PM_{2.5}$ emissions were expected to drop by 85% by 2015.

NRDC.I1-15

- **Actual 2014 emissions were greater than those estimated for the fully mitigated scenario in the 2017 DSEIR.** The difference represents excess emissions above the emissions that would have occurred if mitigation measures had been implemented as approved through 2014. For example, 1203 lb excess peak daily NO_x emissions were emitted in 2014 (i.e., 9396 lb/day minus 8193 lb/day). (Compare "**---** 2014 Baseline" to "■2017 DSEIR; Fully Mitigated Scenario".) **However, analogous information necessary to estimate excess emissions was omitted from the 2017 DSEIR for the remainder of the period 2005-2025**—i.e., the period when the non-implemented air quality mitigations were expected to gradually phase in (but didn't).

NRDC.I1-16

- **Ignoring the illegal excess emissions between 2005 and 2025,** the 2017 DSEIR suggests that by 2023 through 2045, the proposed revised implementation plan will be equivalent to the fully mitigated scenario. (Compare "■ 2017 DSEIR; Revised Mitigation Scenario" to "■2017 DSEIR; Fully Mitigated Scenario.) **However, this conclusion is not sufficiently supported in the 2017 DSEIR due to the technical deficiencies discussed through the remainder of this document.**

[3] For the 2008 EIR, EMFAC2007 was applied (e.g., see page 3.2-26 in Section 3.2 of the 2008 Draft EIR document; page 3-63 in Chapter 3 of the 2008 Final EIR document). For the 2017 DSEIR, EMFAC2014 was applied (see page 3.1-29 in Section 3.1 of the DSEIR document).

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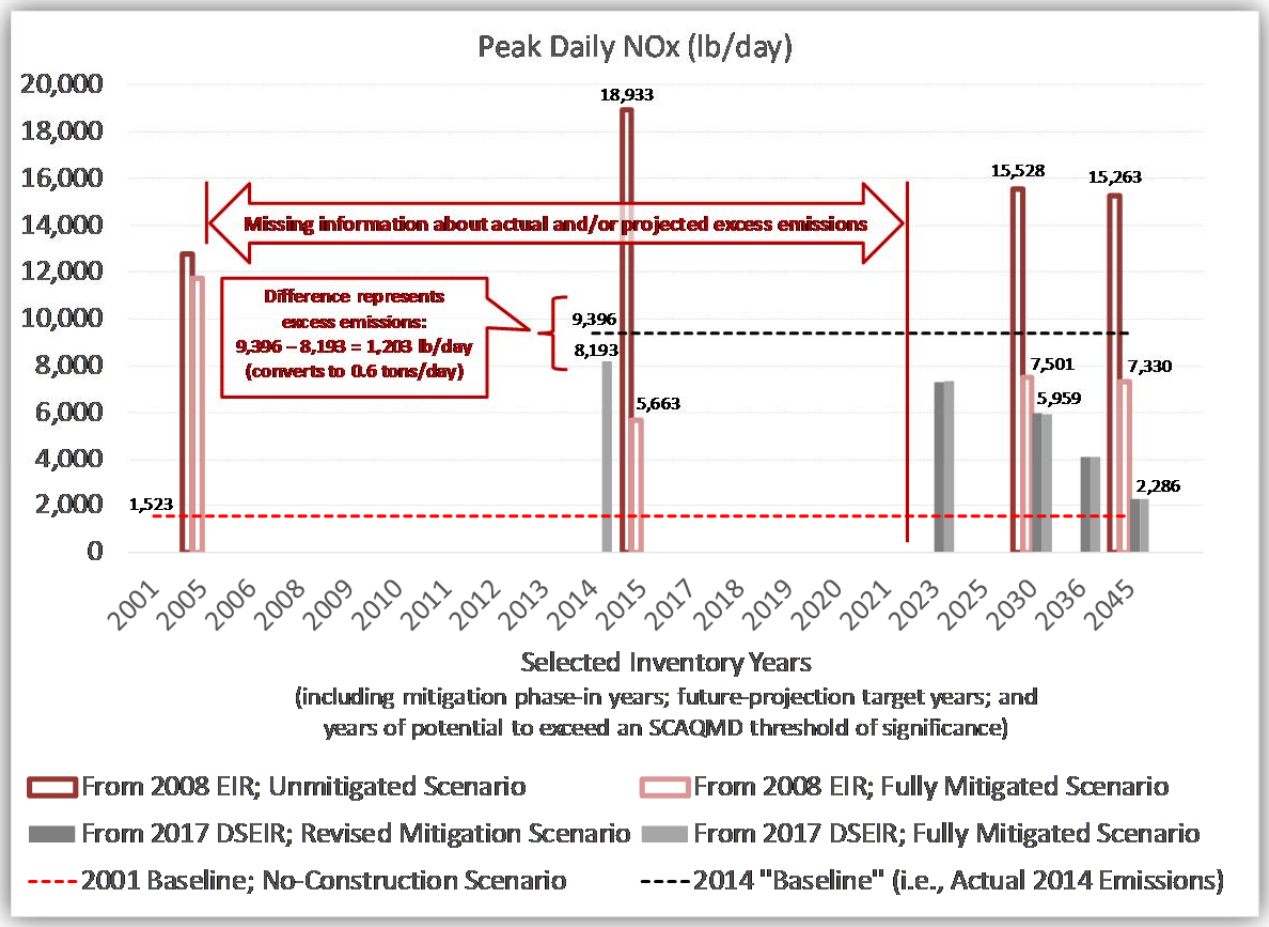

Figure 1. Comparison of project-level NO_x emissions as represented in the 2008 EIR and 2017 DSEIR.[4]

[4] **Figures 1-2 legend definitions:**

2008 EIR: Scenario is represented in the 2008 EIR and represents the information and emissions models available at the time the 2008 EIR was developed.

2017 DSEIR: Scenario is represented in the 2017 DSEIR and represents the latest updated information and emissions models currently available.

Unmitigated: Scenario represents emissions that would be expected if the CS Container Terminal were constructed without any implementation of air quality mitigation measures.

Fully Mitigated: Scenario represents emissions that would be expected if all approved mitigation measures had been implemented as specified in the 2008 EIR.

Revised Mitigation: Scenario corresponds to actual implementation progress (to date) and proposed relaxation of mitigation plans as proposed in the 2017 DSEIR (future years).

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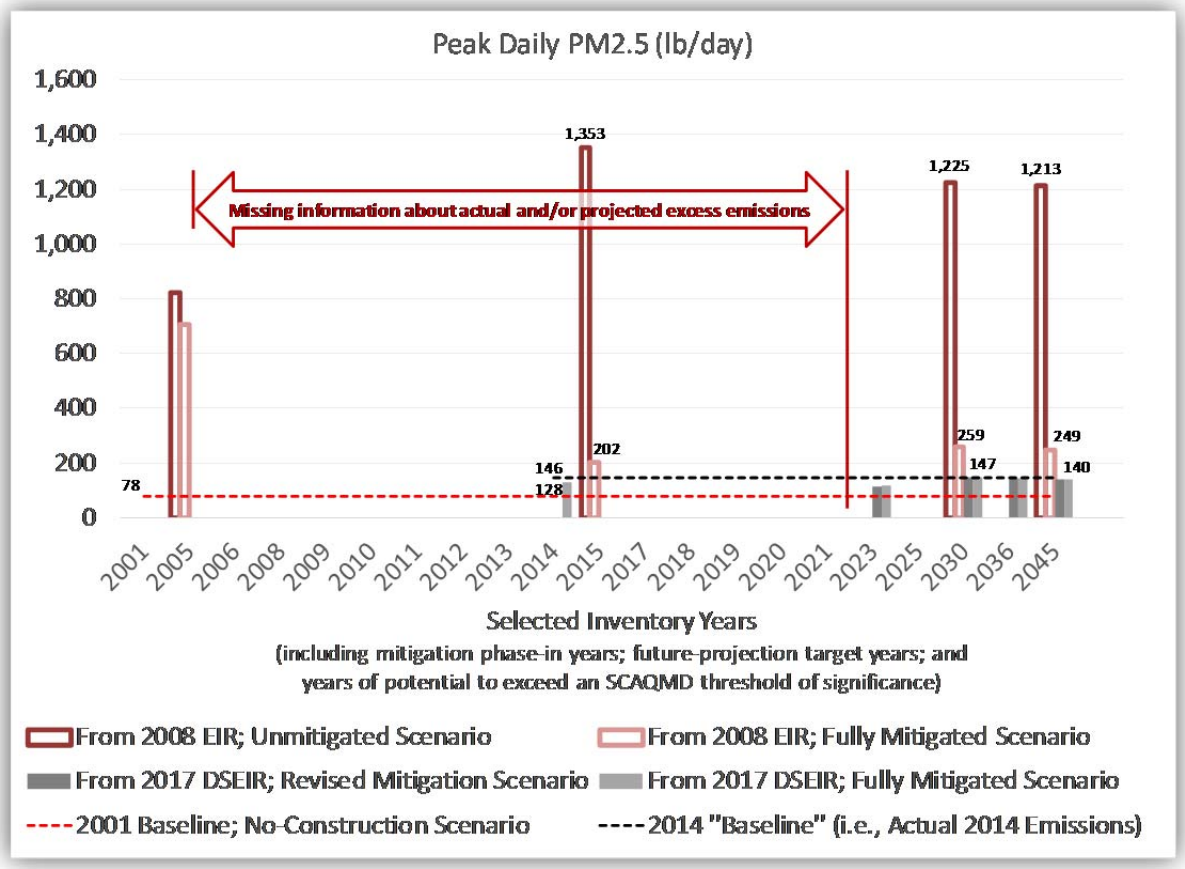

Figure 2. Comparison of project-level $PM_{2.5}$ emissions as represented in the 2008 EIR and 2017 DSEIR.

Review of Selected High-Impact Mitigation Measures and Emissions Sources

NRDC.I1-17

Selected mitigation measures affecting heavy-duty drayage trucks, hoteling of ocean-going vessels, top-pick cargo handlers, and rubber-tired gantry cranes (RTGs) were reviewed in greater detail. These emissions sources were selected for closer review because (a) they contribute significantly to the 2017 emission inventories (see **Figure 3**) and/or (b) the full implementation of approved mitigation measures would have yielded relatively large emissions benefits. The mitigation measures affecting these sources are re-stated briefly as follows (identifier numbers from the 2008 EIR appear in parenthesis).

- Heavy-duty trucks were expected to meet phased requirements from 2012-2018 for operating on liquefied natural gas (LNG) gas power (MMAQ-20).
- Ocean-going vessels (OGV) were expected to meet phased requirements from 2005-2011 for using alternative maritime power (AMP) during ship hoteling (MMAQ-9).
- Cargo handling equipment (CHE) was expected to meet Tier 4 engine standards by the end of 2014; and all RTGs were to be electric-powered by 2009 (MMAQ-15, -16, and -17).

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NRDC.I1-17

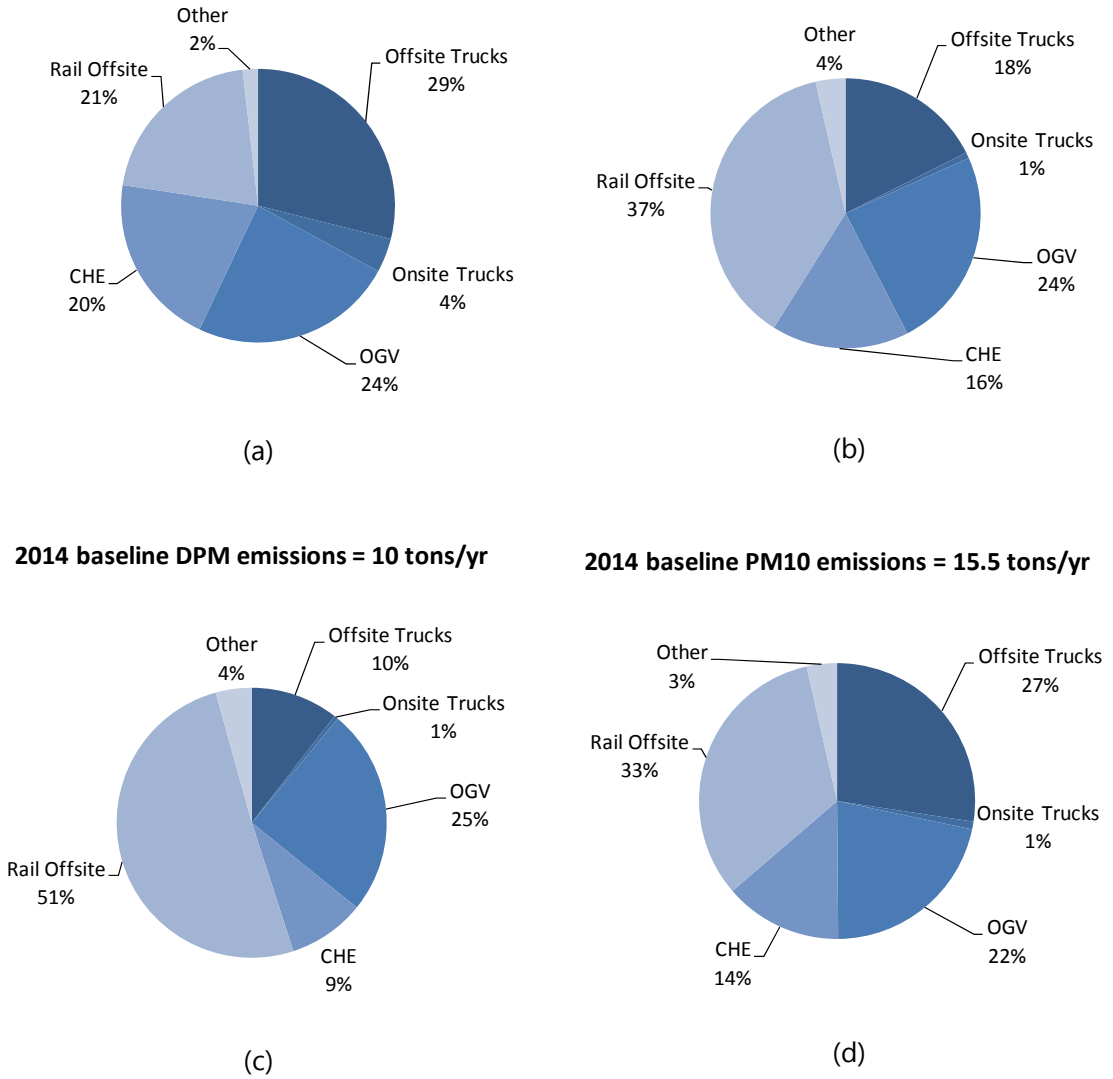

Figure 3. Contributions of major source categories to project-level 2014 annual emissions of (a) NOx, (b) $PM_{2.5}$, (c) DPM emissions, and (d) PM_{10} emissions.

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NRDC.I1-17

NRDC.I1-18

Figures 4 and 5 illustrate alternative estimates of project-level PM and NO_x emissions for heavy-duty trucks operating within the boundaries of the CS Container Terminal Project. Based on best available information, STI staff working under my direction prepared estimates of annual emissions for two scenarios[5]: (a) implementation of MMAQ-20 as approved ("Estimate - Fully Mitigated Plan" in the figures) and (b) implementation as proposed in the 2017 DSEIR ("Estimate - Relaxed Mitigation Plan" in the figures). These estimates cover several calendar years (2013, 2014, 2017, 2018, and 2023); and they are plotted alongside the analogous emissions estimates from the 2017 DSEIR for year 2023—i.e., the only comparable year covered in the 2017 DSEIR. **STI's estimates show the excess emissions from heavy-duty trucks occurring, while the information from the 2017 DSEIR either omits (2013-2018) or even suggests no benefit from the approved mitigation plan in 2023.**[6] Note that by ignoring years earlier than 2023, the 2017 DSEIR takes advantage of an EMFAC-projected conversion of the vehicle fleet in 2023 to modern emissions standards—after which time, diesel and LNG trucks are expected to emit PM at similar rates. In other words, federal or statewide regulations are expected to yield a large drop in PM emissions from diesel vehicles in 2023, regardless of which mitigation scenario is in effect at the CS Container Terminal. However, the lack of NO_x benefits projected for 2023 in the 2017 DSEIR is unsupported. LNG vehicles are known to emit NO_x at a much reduced rate compared to diesel vehicles. However, the **NO_x emission factors used in the 2017 DSEIR for heavy-duty trucks are contrary to published literature**. Not only are the emission factors for diesel-fueled trucks set to be equal to those for LNG-fueled trucks in the 2017 DSEIR, but the NO_x emission factors for heavy-duty trucks increase from 2023 to 2045 (see **Figure 6**). Both of these patterns are contrary to published literature.[7]

---

[5] Our estimates are based on emissions studies by Chandler et al. (2000a), Chandler et al. (2000b), Chandler et al., (2001), and City of Los Angeles Bureau of Sanitation (2004).

[6] A note concerning drayage truck duty-cycles as represented in EMFAC modeling: According to the EMFAC2014 Technical Support Document (see https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf), the EMFAC base emission rates were derived using three types of dynamometer test cycles. These test cycles do not reflect specific base emission rates of drayage trucks: (1) Urban dynamometer driving schedule (UDDS; see https://www.dieselnet.com/standards/cycles/udds.php); (2) heavy heavy-duty diesel trucks (HHDDT; see https://www.dieselnet.com/standards/cycles/hhddt.php); and (3) high speed cruise mode (see https://www.arb.ca.gov/msprog/hdlownox/files/02workshop_11032016-emfac2014_inventory.pdf).

[7] A note concerning University of California—Riverside's (UCR) research findings on in-use LNG and diesel trucks (see their summary at http://www.cert.ucr.edu/news/2017/2017-02-01.html and full report at http://www.cert.ucr.edu/research/efr/2016%20CWI%20LowNOx%20NG_Finalv06.pdf). The key findings from the UCR's work include: (a) the cleanest heavy-duty natural gas engine currently available is certified by ARB at 0.02 g/bhp-hr, 90% cleaner than the cleanest certified heavy-duty diesel engine (at 0.2 g/bhp-hr); and; and (b) 2010 diesel truck with selective catalytic reduction (SCR) was tested with 1.02 g/bhp-hr NOx emission rate, 5 times higher than its EPA certification standard.

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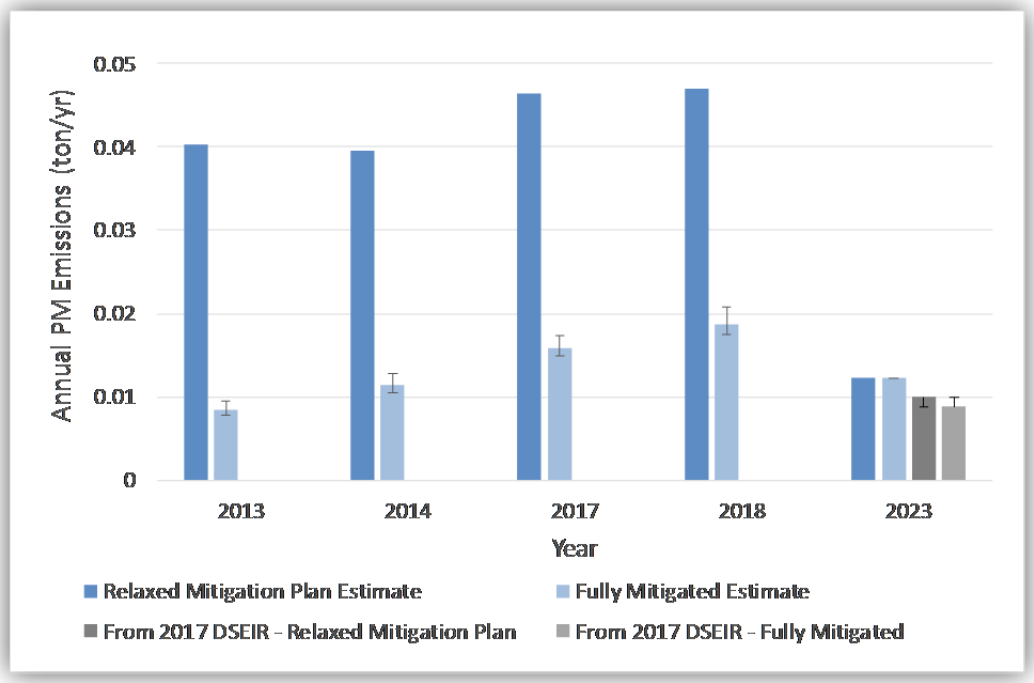

Figure 4. Comparison of alternative estimates of annual PM emissions from on-site trucks.

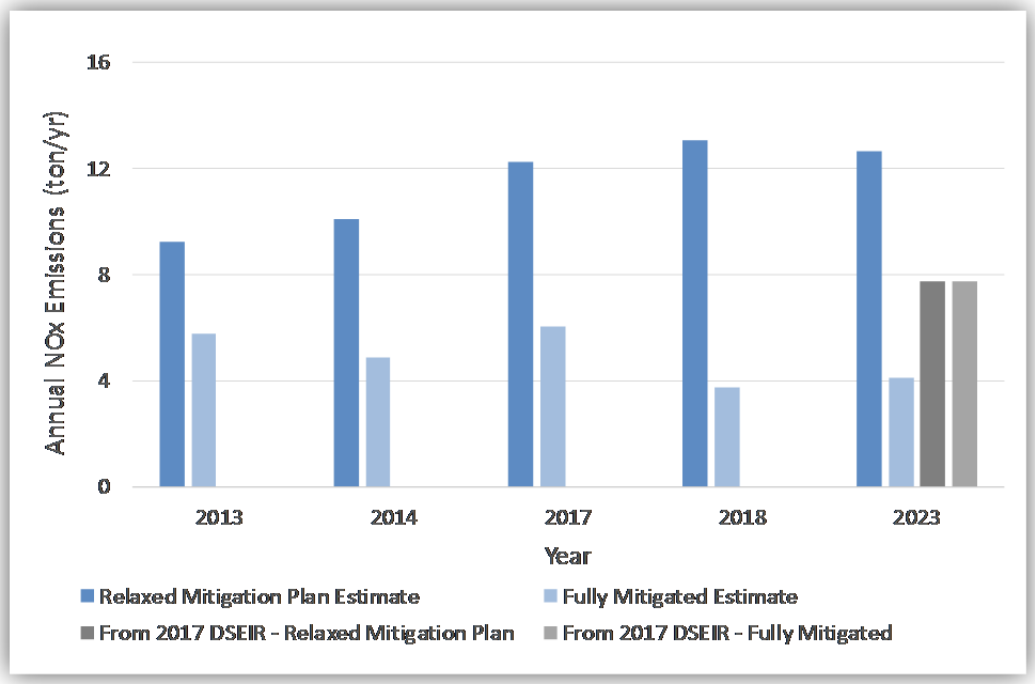

Figure 5. Comparison of alternative estimates of annual NO_x emissions from on-site trucks.

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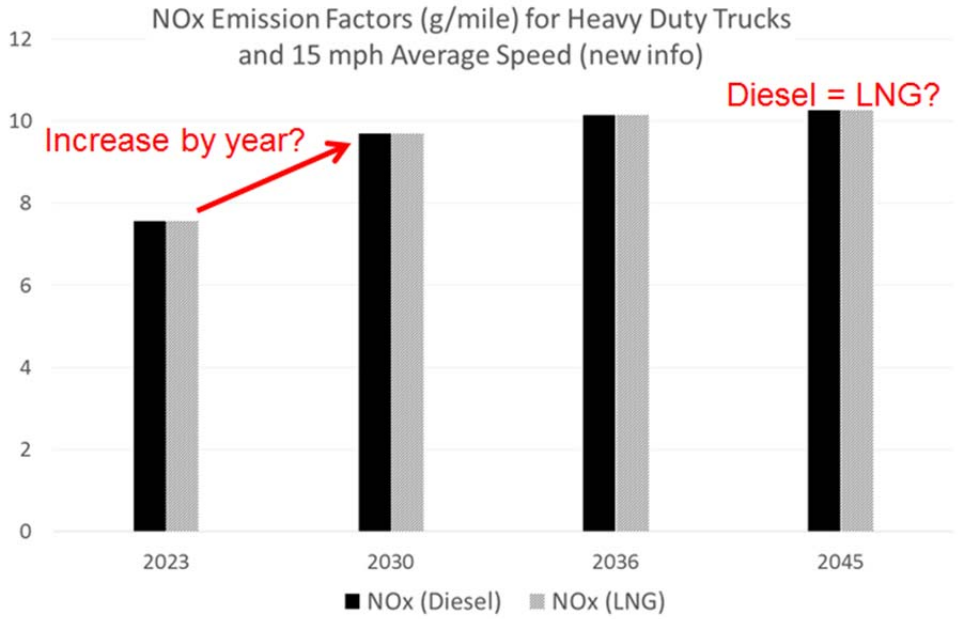

Figure 6. NO_x emission factors applied for heavy-duty trucks in the 2017 DSEIR.

Additional examples of the contradictory, unsubstantiated, and inconsistent statements, assumptions, and calculations in the air quality sections of the 2017 DSEIR include:

NRDC.I1-19

- **The 2017 DSEIR failed to report the excess emissions from failure to comply with the approved mitigation measures related to hoteling of OGVs and cargo handling equipment.** Similar to our previous observation concerning the comprehensive project-level emissions inventory, information necessary to calculate excess emissions are not presented in the 2017 DSEIR during a critical period when approved mitigation measures were expected to gradually phase in (but didn't). Furthermore, we noted an inconsistency when reviewing the emissions for OGVs. Figures 7 and 8 illustrate project-level, peak-day NO_x and $PM_{2.5}$ emissions for hoteling of OGVs as presented in the 2017 DSEIR and 2008 EIR; and for comparison, Figures 9 and 10 illustrate analogous *average-day* emissions. Under the revised mitigation measures plan proposed in the 2017 DSEIR, OGVs should be using alternative maritime power (AMP) during ship hoteling with a 95% compliance rate by 2018. Accordingly, the differences are expected to be small when comparing the approved mitigation plan and the relaxed mitigation plan for OGV emissions in years later than 2018. Figures 7 and 8 do show small differences in peak-day emissions post-2018; but Figures 9 and 10 show large differences and the reason for this inconsistency is unclear.

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NRDC.I1-19

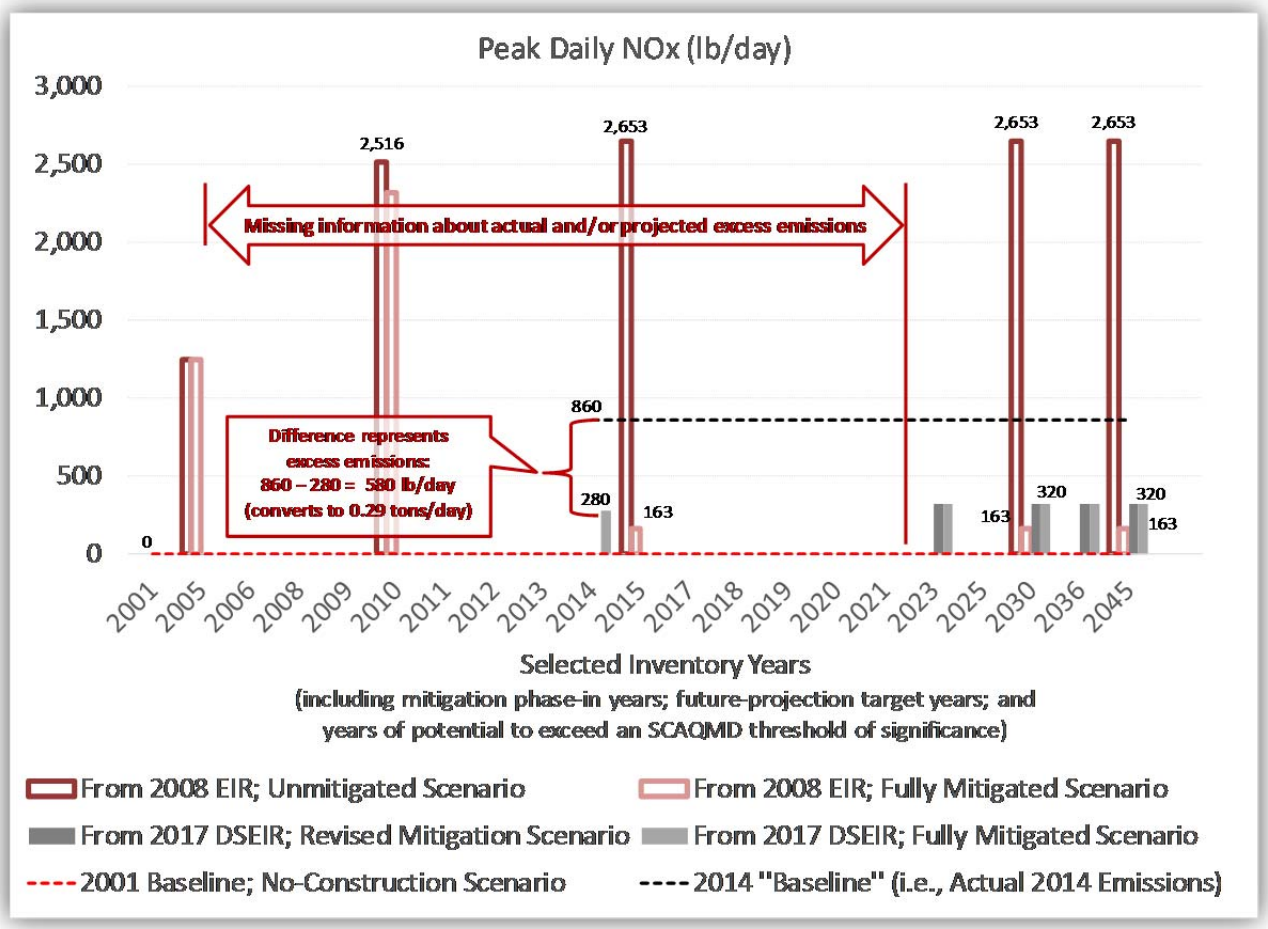

Figure 7. Comparison of various peak-day NO_x emissions scenarios for hoteling of OGVs as represented in the 2008 EIR and 2017 DSEIR.[4]

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NRDC.I1-19

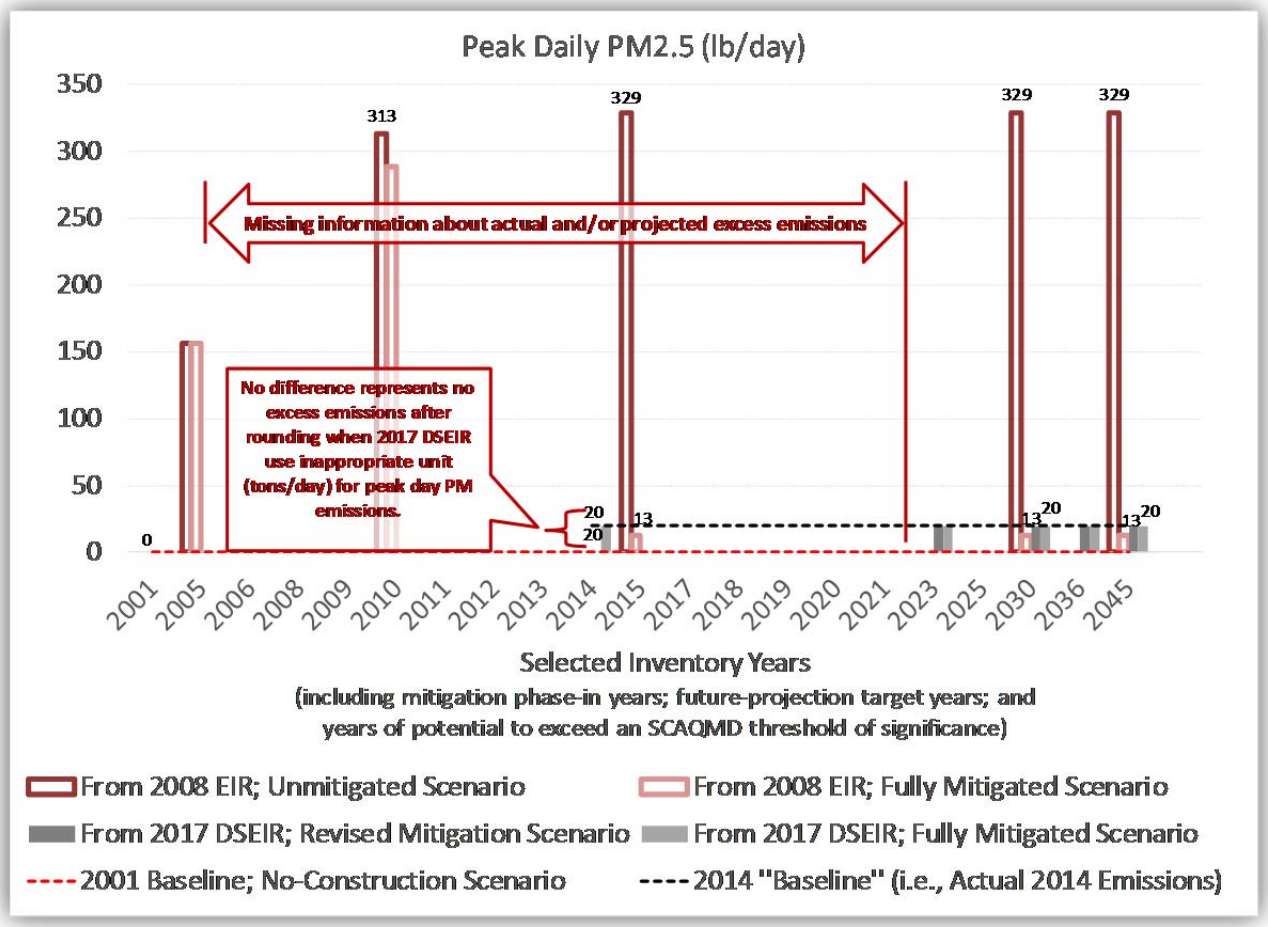

Figure 8. Comparison of various peak-day $PM_{2.5}$ emissions scenarios for hoteling of OGVs as represented in the 2008 EIR and 2017 DSEIR.[4]

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NRDC.I1-19

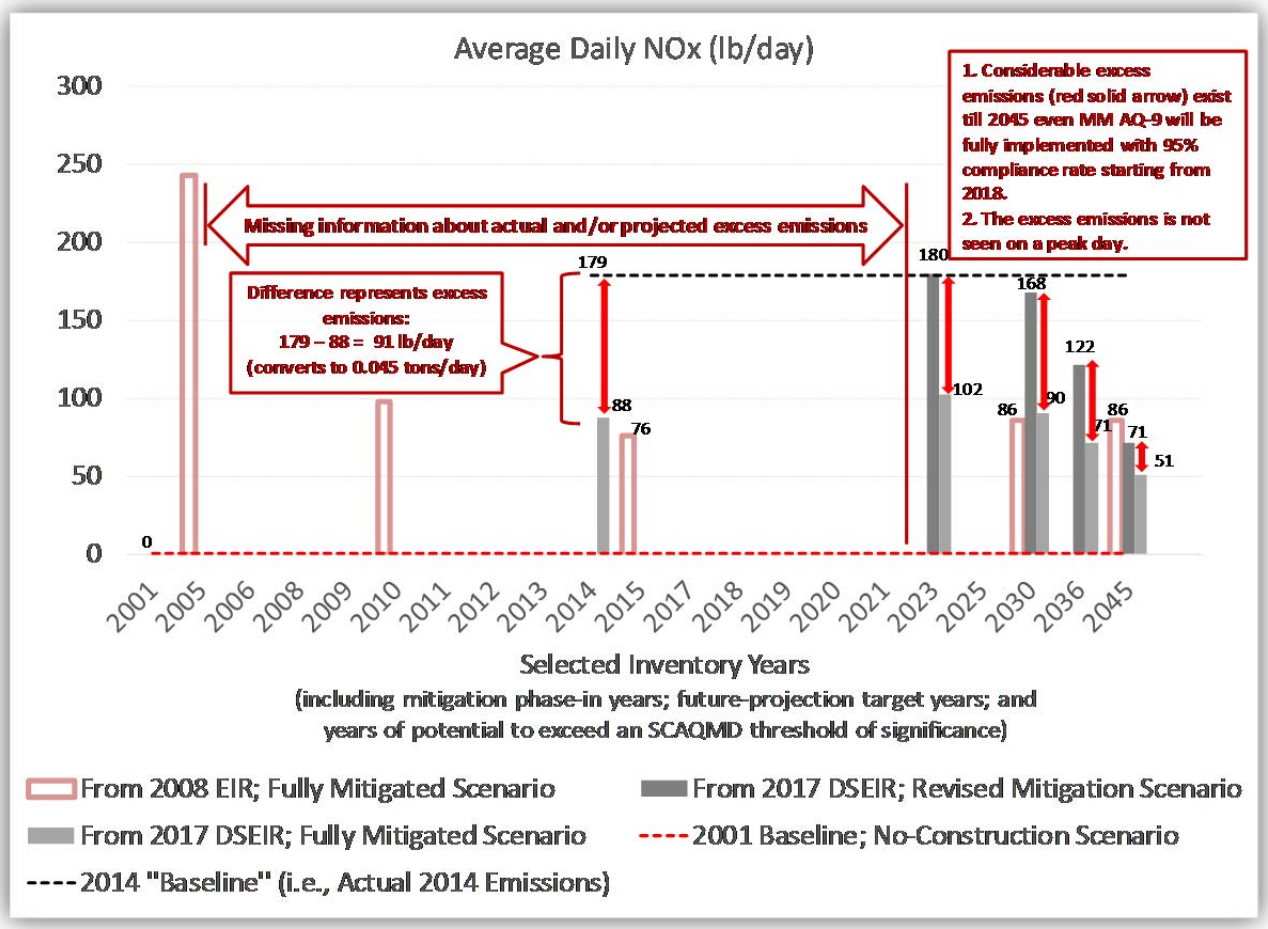

Figure 9. Comparison of various average-day NO_x emissions scenarios for hoteling of OGVs as represented in the 2008 EIR and 2017 DSEIR.[4]

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NRDC.I1-19

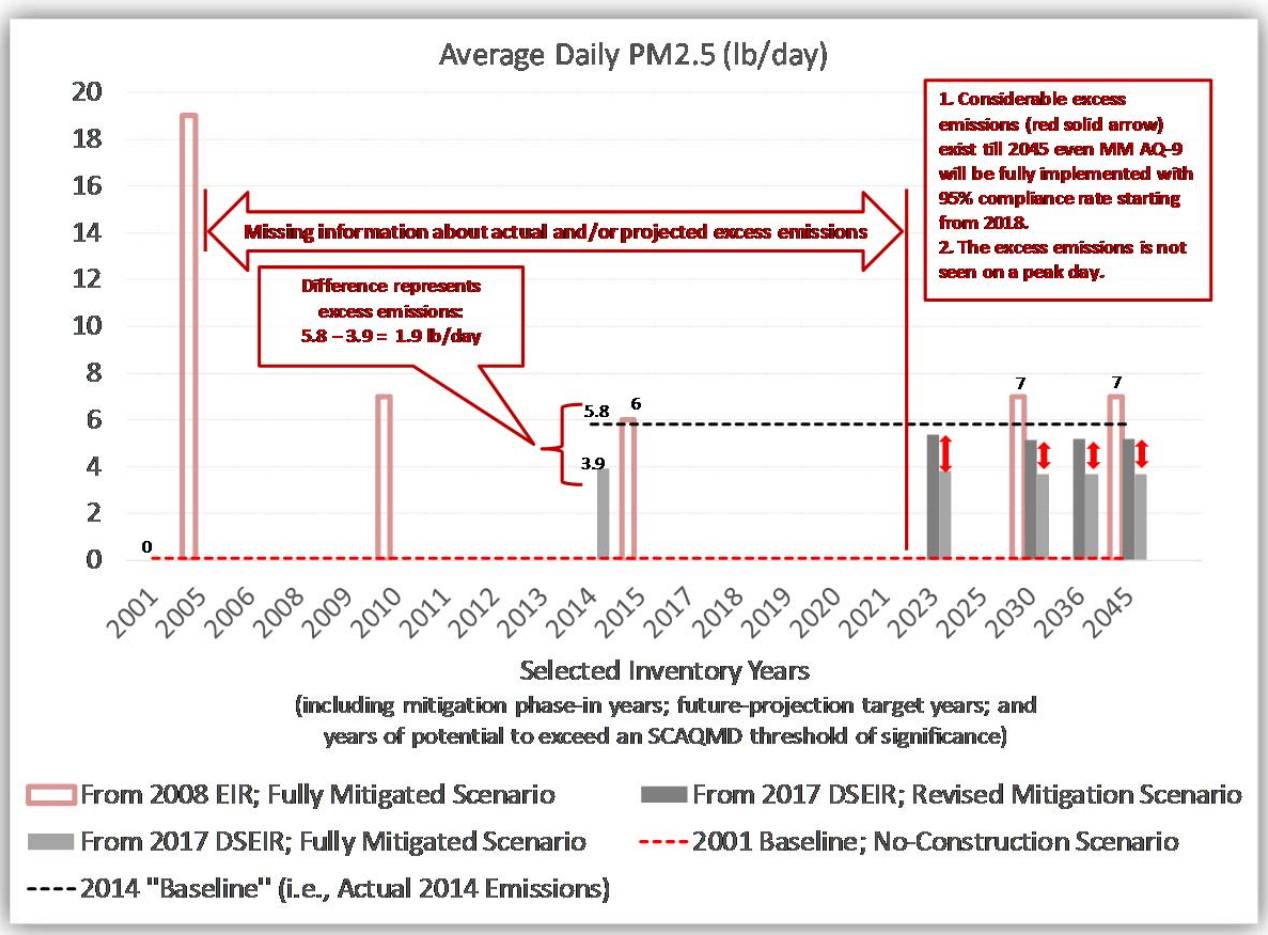

Figure 10. Comparison of various average-day $PM_{2.5}$ emissions scenarios for hoteling of OGVs as represented in the 2008 EIR and 2017 DSEIR.[4]

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NRDC.I1-20

- Figures 11 and 12 illustrate project-level, peak-day NO_x and $PM_{2.5}$ emissions for cargo-handling equipment. An inconsistency issue was found in the 2008 EIR for analysis year 2010 where emissions for the approved mitigation scenario are greater than the emissions for the unmitigated scenario. If emissions from the 2008 EIR are used as a basis for comparison, estimates for these two scenarios need to be verified.

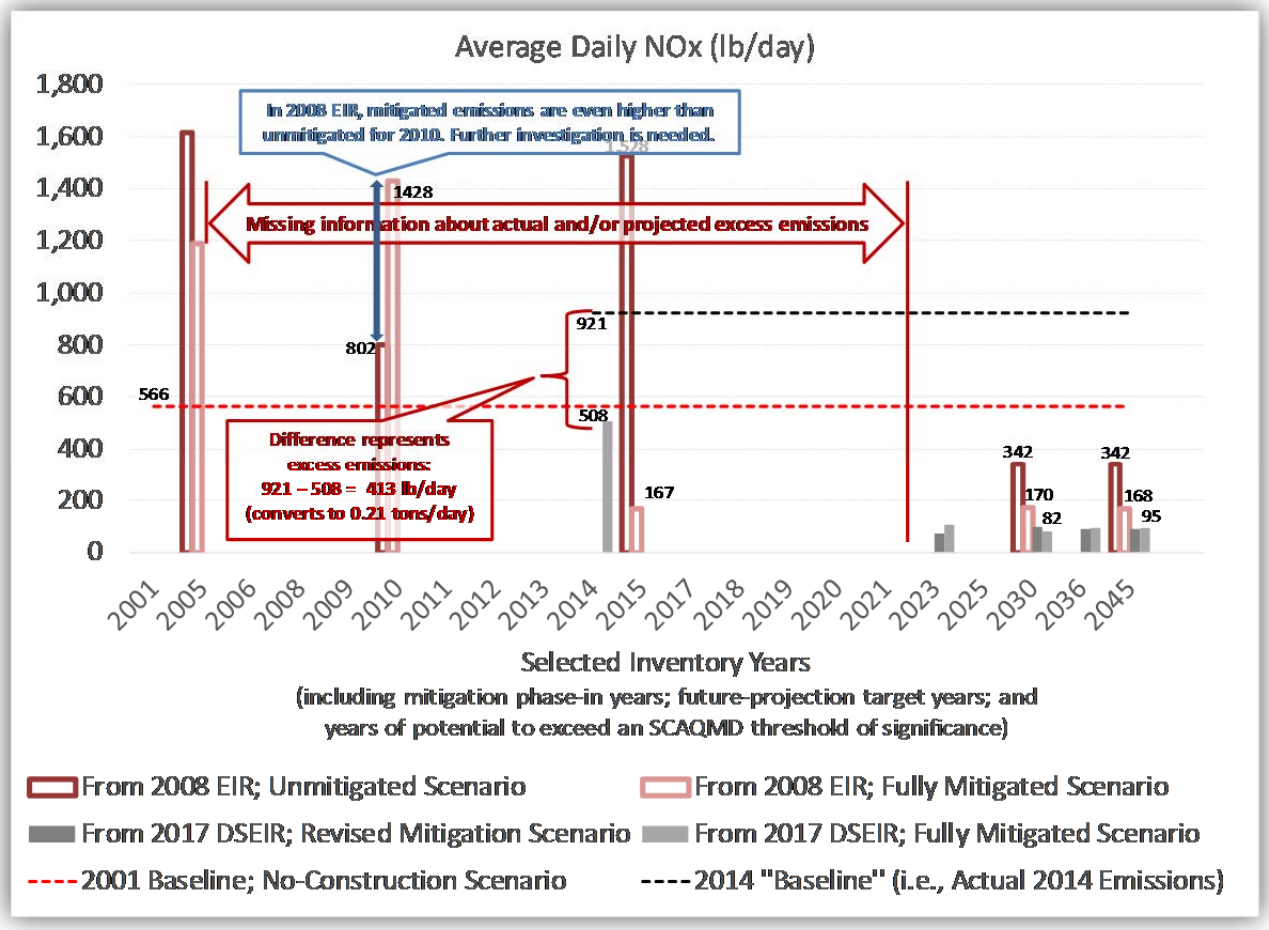

Figure 11. Comparison of various NO_x emissions scenarios for cargo handling equipment as represented in the 2008 EIR and 2017 DSEIR.[4]

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NRDC.I1-20

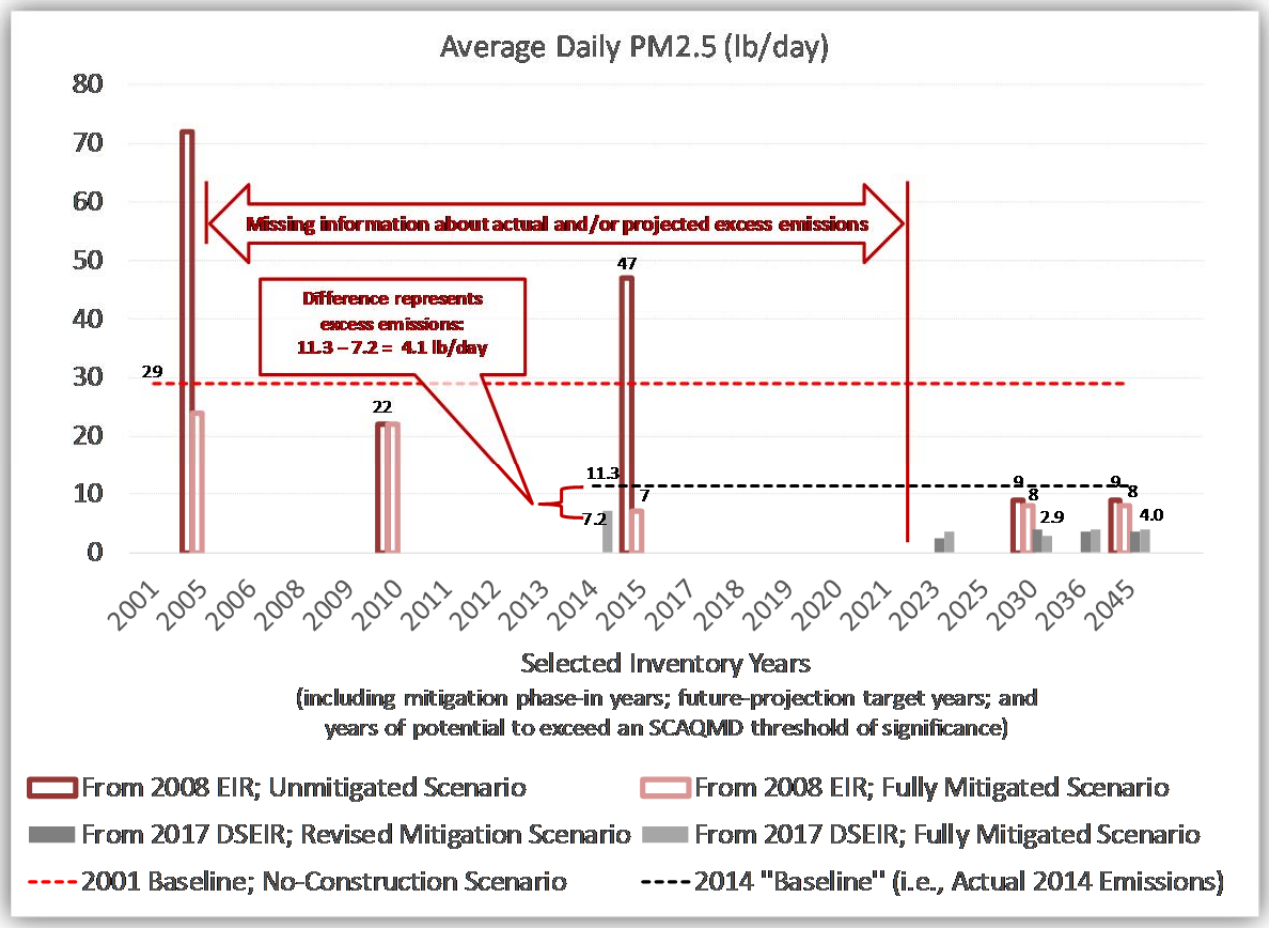

Figure 12. Comparison of various $PM_{2.5}$ emissions scenarios for cargo handling equipment as represented in the 2008 EIR and 2017 DSEIR. [4]

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Professional Qualifications: Lyle R. Chinkin

I, **Lyle R. Chinkin**, currently serve as the Chief Scientist at Sonoma Technology. Inc. (STI) and hold the title of President Emeritus. I am a nationally recognized expert in emission inventory preparation, emission inventory assessment, and air quality analysis. I have over 30 years of professional consulting experience in air quality, in addition to more than five years of professional experience at the California Air Resources Board (ARB). My areas of expertise include (1) developing and improving regional emission inventories; (2) providing independent assessments of emission inventories using bottom-up and top-down evaluation techniques; (3) conducting field studies to obtain real-world data and improve activity estimates and emission factors; (4) conducting scoping studies to develop conceptual models of community-scale air quality; and (5) providing expert testimony and presentations to public boards. I was co-author of the U.S. Environmental Protection Agency's national guidance document on the preparation of emission inputs for photochemical air quality simulation models. A full resume is attached to this document.

This document includes my review of the 2017 Draft Supplemental Environmental Impact Report (DSEIR) for the China Shipping Container Terminal Project (Los Angeles Harbor Department, 2017). The review involved independent evaluation of the emissions calculations presented in the 2017 DSEIR and assessment of excess emissions from the CS Container Terminal Project due to non-compliance and/or incomplete implementation of the mitigation measures set forth in the 2008 Environmental Impact Report (EIR) (Los Angeles Harbor Department, 2008). To complete this independent review, STI staff, at my direction, obtained various data and supporting documents for the 2017 DSEIR and the 2008 EIR provided by the Port of Los Angeles to the Natural Resources Defense Council (NRDC) attorneys. Publicly available information was also used as reference material to support this review. The opinions expressed in this document are my own and are based on the data and facts available at the time of writing. Should additional relevant or pertinent information become available, I reserve the right to supplement the discussion and findings in this document.

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Los Angeles Harbor Department (2017) Berths 97-109 [China Shipping] container terminal project. Draft supplemental environmental impact report, June. Available at **https://www.portoflosangeles.org/EIR/ChinaShipping/DSEIR/dseir_china_shipping.asp**.

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Response to Comment NRDC.I1-1

Please see response to Comment NRDC-6.

Response to Comment NRDC.I1-2

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable. For more information, see Comments NRDC-6 and NRDC.K1-1.

Response to Comment NRDC.I1-3

Part of this comment refers to the 2014 baseline presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, accordingly, that part of the comment is no longer applicable. Please see Response to Comment NRDC-15 that addresses other parts of the comment.

Response to Comment NRDC.I1-4

Please see response to Comment NRDC-6.

Response to Comment NRDC.I1-5

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable.

Response to Comment NRDC.I1-6

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable.

Response to Comment NRDC.I1-7

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable.

Response to Comment NRDC.I1-8

This is an introductory comment to comments addressed below.

Response to Comment NRDC.I1-9

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR; accordingly, the comment is no longer applicable. With respect to the baseline, please see Response to Comment NRDC-6.

Response to Comment NRDC.I1-10

Please see Response to Comment NRDC-15.

Response to Comment NRDC.I1-11

Regarding assumptions on ocean-going vessel usage of AMP for years 2023-2045, please see Response to Comment SCAQMD-26.

Response to Comment NRDC.I1-12

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, in which CHE emissions have been revised; accordingly, the comment is no longer applicable.

Response to Comment NRDC.I1-13

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, in which additional analysis years have been added to the air quality analysis and peak-day emissions have been updated; accordingly, the comment is no longer applicable.

Response to Comment NRDC.I1-14

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, in which the air quality analysis and peak-day emissions have been updated; accordingly, the comment is no longer applicable.

Response to Comment NRDC.I1-15

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, in which additional analysis years have been added to the air quality analysis and peak-day emissions have been updated; accordingly, the comment is no longer applicable. Please see Response to Comment NRDC-6 for a discussion of "excess emissions," as the non-CEQA term is used by the commenter, disclosed in Recirculated DSEIR.

Response to Comment NRDC.I1-16

This comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, in which additional analysis years have been added to the air quality analysis and peak-day emissions have been updated; accordingly, the comment is no longer applicable. Please see Response to Comment NRDC-6 for a discussion of the so-called "excess emissions," as the non-CEQA term is used by the commenter, disclosed in Recirculated DSEIR.

Response to Comment NRDC.I1-17

The first part of this comment (Figure 3, page 7 and 8) refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, in which additional analysis years have been added to the air quality analysis and peak-day emissions have been updated; accordingly, this part of the comment is no longer applicable.

For the second part of this comment (page 9), LAHD disagrees with the claim that the EIR's air quality analysis used an EMFAC-projected (default) conversion of the vehicle fleet. The drayage truck emission rates are based on future projections of the port-area-wide drayage fleet produced for the Port Emission Inventories (LAHD 2019), which include effects of local and state regulations, including the Clean Truck Program.

Please see Response to Comment NRDC-6 for a discussion of the so-called "excess emissions" disclosed in Recirculated DSEIR.

Response to Comment NRDC.I1-18

Please see Response to Comment NRDC-15 for a discussion of emission factors for LNG drayage trucks.

Response to Comment NRDC.I1-19

Figures and data discussed in this comment refers to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, where the AQ analysis, baseline and peak day emissions have been updated, accordingly, the comment is no longer applicable. Please see Response to Comment NRDC-15 for a discussion on OGV emissions.

Response to Comment NRDC.I1-20

Figures and data discussed in this comment refer to material presented in a previous draft (the DSEIR). That document has been superseded by the Recirculated DSEIR, in which additional analysis years have been added to the air quality analysis and peak-day emissions have been updated; accordingly, the comment is no longer applicable.

2.3.2.11 Richard Havenick

October 30, 2018

City of Los Angeles Harbor Department
Christopher Cannon, Director
Environmental Management Division
P.O. Box 151
San Pedro CA 90733-0151

Subject: Berths 97-109 [China Shipping] Container Terminal Project (SCH#2003061153) Comments Submittal

To whom it may concern,

For the Subject Project and for the failure to comply with the mitigations defined in the respective Year 2008 Environmental Impact Report for the China Shipping Project, please respond to the following recommendations.

HAVENICK- 1 1) State the cause of the Port's management or system failure that resulted in tenant's violation of the referenced 2008 EIR and state the correction(s) that will preclude a repeat failure to comply with required environmental mitigations by Port tenants.

HAVENICK-2 2) State the cause of the Port's failure to perform per the Mitigation Monitoring and Reporting Program and the correction(s) that will ensure future compliance.

HAVENICK-3 3) Evaluate whether other required mitigations were not performed elsewhere in the Port, unrelated to China Shipping, and state the conclusion of the evaluation.

HAVENICK-4 4) Develop and implement a process to present yearly to the public a listing of Mitigations required with their respective phases of completion.

HAVENICK-5 5) As emissions of carbon monoxide, nitrogen oxides, and volatile organic compounds will be significant over multiple years, state the actions to reduce emissions of the listed pollutants elsewhere in the Port to ensure no net increase in the respective emissions and to remain consistent with the San Pedro Bay Ports Clean Air Action Plan.

HAVENICK-6 6) As cancer risks would be significant for residential, sensitive, and occupational receptor types, state the actions to reduce cancer risk elsewhere in the Port to ensure no net increase in the respective cancer risks and to remain consistent with the San Pedro Bay Ports Clean Air Action Plan.

HAVENICK-7 7) State the expected date (or time period) when the new lease amendment is expected to be filed.

Thank you.

Richard Havenick

Coastal San Pedro Neighborhood Council Stakeholder
3641 South Parker Street
San Pedro CA 90731

Response to Comment HAVENICK-1

Please see Response to Comment CSPNC-2.

Response to Comment HAVENICK-2

Please see Responses to Comments CSPNC-1 and CSPNC-2.

Response to Comment HAVENICK-3

Please see Responses to Comments CSPNC-2 and CSPNC-3.

Response to Comment HAVENICK-4

Please see Response to Comment CSPNC-4.

Response to Comment HAVENICK-5

This is not a comment on the adequacy of the Recirculated DSEIR. Discussion of mitigation measures and other pollution-reduction actions for Port projects other than the Revised Project is outside the scope of this SEIR and is not required by CEQA. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

Response to Comment HAVENICK-6

Please see Response to Comment Havenick-5.

Response to Comment HAVENICK-7

Please see Response to Comment CoSPNC-4.

2.3.2.12 Tony Briganti

Ochsner, Lisa

From: Tony Briganti <ynotony2001@yahoo.com>
Sent: Wednesday, November 14, 2018 11:46 AM
To: Ceqacomments
Subject: Fw: PUBLIC COMMENT: mitigation issues avoided for 10+ years

I am hereby authoring this e-mail + attachments to you from Anthony Briganti. . . Send verified by Tony

----- Forwarded Message -----
From: Tony Briganti <ynotony2001@yahoo.com>
To: environmental@portla.org <environmental@portla.org>
Sent: Monday, November 12, 2018, 11:07:17 AM PST
Subject: PUBLIC COMMENT: MITIGATION ISSUES BEING AVOIDED

BRIGANTI-1

I have worked at the Long Beach Naval Shipyard for 22 years and lived in the vicinity of the Port of Los Angeles (POLA) for 74 years, and I just need to make a public comment about the recent mitigation issues that have been purposely avoided for years regarding the China Shipping Terminal and its "recirculated draft supplemental environmental impact report (SEIR)" settlement agreement since at least 2015. This has NOT been addressed in a timely manner and should be completed HERE AND NOW by the managers at Port of Los Angeles / China Shipping Terminal mitigation committee.
Furthermore, PRIMARILY. . . if the management at POLA cannot solve this issue then State Lands Commission ought to step in to complete adequate and efficient stewardship to ensure competent action immediately so that it may ultimately be responsible for control.
If this is not the place for these public comments, please inform me as to where to make one at this late date. Call my phone or email for further contact #562-298 7320.

I am hereby authoring this e-mail + attachments to you from Anthony Briganti. . . Send verified by Tony

Response to Comment BRIGANTI-1

The comment is noted and is hereby part of the Final SEIR, and is therefore before the decision-makers for their consideration prior to taking any action on the Revised Project. The comment is general and does not reference any specific section of the Recirculated DSEIR, therefore no further response is required (Public Resources Code § 21091(d); CEQA Guidelines § 15204(a)).

2.3.2.13 Public Hearing Comments

BERTHS 97-109 {CHINA SHIPPING}

CONTAINER TERMINAL PROJECT

RECIRCULATED DRAFT SUPPLEMENTAL EIR PUBLIC HEARING

LOS ANGELES HARBOR DEPARTMENT

ENVIRONMENTAL MANAGEMENT DIVISION

425 S. PALOS VERDES STREET

SAN PEDRO, CALIFORNIA

THURSDAY, OCTOBER 25, 2018

6:05 P.M.

OLIVIA D. LIZARRAGA,
CERTIFIED STENOGRAPHIC REPORTER NO. 13475

JOB NO. 159197
PAGES 1 THROUGH 14

SAN PEDRO, CALIFORNIA, THURSDAY, OCTOBER 25, 2018

(6:05 P.M.)

~OOO~

MR. SEROKA: GOOD EVENING, LADIES AND GENTLEMAN, MEMBERS OF THE PUBLIC, DISTINGUISHED GUESTS, AND HARBOR DEPARTMENT STAFF. MY NAME IS GENE SEROKA. I AM THE EXECUTIVE DIRECTOR HERE, AT THE PORT OF LOS ANGELES, AND THANK YOU FOR JOINING US AT THE PUBLIC MEETING FOR THE RECIRCULATED DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT.

HERE WITH ME THIS EVENING IS DIVISION HEAD CHRIS CANNON, WHO WILL TAKE US THROUGH A POWERPOINT AND A LITTLE BIT ABOUT WHAT WE'RE GOING TO BE DOING THIS EVENING.

CHRIS?

MR. CANNON: THANK YOU VERY MUCH FOR COMING. THE PURPOSE OF THIS MEETING, IT'S A PUBLIC HEARING FOR AN ENVIRONMENTAL IMPACT REPORT THAT'S PROVIDED OVERVIEW AND FINDINGS OF THE RECIRCULATED DRAFT SUPPLEMENTAL EIR AND TO PROVIDE INFORMATION ABOUT THE PROPOSED PROJECT CHANGES.

WE'LL TRY THAT AGAIN --

THANK YOU FOR COMING TONIGHT, AND MY NAME IS . CHRIS CANNON. I'M DIRECTOR OF ENVIRONMENTAL MANAGEMENT AT THE PORT. I AM HERE TO PROVIDE A LITTLE BIT OF AN OVERVIEW OF INFORMATION ABOUT THE PROPOSED PROJECT AND THE PROJECT CHANGES, WHICH WOULD BE THE REVISED PROJECT, AND THEN PROVIDE

AN OVERVIEW AND FINDINGS OF THE DRAFT RECIRCULATED SUPPLEMENTAL EIR AND TO OBTAIN PUBLIC COMMENTS.

WE HAVE SPANISH TRANSLATION AVAILABLE FOR ANYBODY WHO NEEDS IT. AND, ALSO, IF ANYBODY NEEDS TO FILE A -- FILL OUT A COMMENT CARD, THEY'RE AVAILABLE UP THERE IN THE FRONT.

I WANT TO POINT OUT THAT WE DON'T ANSWER QUESTIONS AT A PUBLIC HEARING. OUR JOB IS TO LISTEN TO YOU; THAT'S WHAT WE'RE HERE TO DO. AND ANY QUESTIONS OR ANY COMMENTS THAT YOU HAVE WILL BE WRITTEN DOWN AND THEY WILL BE RESPONDED TO AS PART OF THE NORMAL PROCESS OF AN ENVIRONMENTAL IMPACT REPORT.

SO OUR PROCESS, THEN, IS WE HAD AN ORIGINAL FINAL EIS/EIR. IT WAS CERTIFIED IN DECEMBER OF 2008. THERE WAS A NOTICE OF PREPARATION ISSUED FOR A SUPPLEMENTAL EIR IN SEPTEMBER OF 2015. WE HAD A SCOPING MEETING SHORTLY AFTER THAT. THE DRAFT SUPPLEMENTAL EIR WAS RELEASED FOR PUBLIC REVIEW IN JUNE OF 2017, WHEN WE HAD A PUBLIC HEARING. IN JULY OF 2017, WE THEN CHOSE TO RECIRCULATE THE DOCUMENT. THERE IS A RECIRCULATED DRAFT -- CIRCULATED DRAFT SUPPLEMENTAL EIR RELEASED FOR PUBLIC REVIEW ON SEPTEMBER 28, 2018. THERE IS A PUBLIC HEARING TODAY, AND THEN FINAL SUPPLEMENTAL EIR CERTIFICATION, WE ANTICIPATE, EARLY TO MID 2019.

JUST QUICKLY, THE PROPOSED PROJECT IS -- SITE IS LOCATED AT 2050 JOHN S. GIBSON BOULEVARD WITHIN THE WEST

BASIN CONTAINER TERMINAL AREA OF THE PORT OF LOS ANGELES. AS YOU CAN SEE FROM THE MAPS THERE, GENERALLY, IT'S THE TRAPAC -- OR, EXCUSE ME, THE YANG MING AND TRAPAC FACILITIES ARE JUST TO THE NORTH. THE WEST BASIN, ITSELF, IS JUST TO THE EAST. THE 110 FREEWAY IS TO THE WEST. AND TO THE SOUTH, ALSO, IS THE CRUISE TERMINAL AND THE 110 FREEWAY, AS WELL AS THE COMMUNITY OF SAN PEDRO.

SO THIS IS JUST A BETTER PICTURE OF THE PROJECT SITE. YOU CAN SEE IT THERE. IT'S SHOWN IN RED, INCLUDING THE RAIL YARD THERE AS IT EXTENDS UP ALONG THE LEFT AND TO THE TOP.

SO TO PROVIDE A QUICK PROJECT OVERVIEW, THE 2008 CHINA SHIPPING FINAL EIR ADOPTED 52 MITIGATION MEASURES AND LEASE MEASURES. MOST OF THOSE HAVE BEEN COMPLETED OR ARE ARE IN PROGRESS AND ARE NOT STUDIED IN THIS SUPPLEMENTAL EIR. TEN MITIGATION MEASURES AND ONE LEASE MEASURE HAVE NOT BEEN FULLLY IMPLEMENTED. UNDER THE REVISED PROJECT MODIFICATIONS TO THESE MEASURES ARE BEING PROPOSED BASED ON FEASIBILITY, AFFECTIVENESS, AVAILABILITY OF ALTERNATIVE TECHNOLOGIES, AND OTHER FACTORS. THIS JUST GIVES YOU A LIST OF THE ACTUAL TEN MITIGATION MEASURES AND ONE LEASE MEASURE.

THE ANALYSIS IS BASED ON THE NATURE OF EACH OF THE MITIGATION MEASURES, FOCUSES ON AIR QUALITY, GREENHOUSE GAS, AND GROUND TRANSPORTATION. THERE WERE KEY UPDATES TO THE ANALYSIS, AND THAT'S WHAT'S ASSOCIATED WITH THE RECIRCULATED

DRAFT. BASED ON PUBLIC COMMENTS, THE RECIRCULATED DRAFT AND SUPPLEMENTAL EIR INCORPORATES NEW INFORMATION, SUCH AS A 2008 BASELINE, WHICH I WILL DISCUSS IN MORE DETAIL IN A MOMENT. ADDITIONAL STUDY YEARS, 2012, 2014, AND 2018 CAPTURE PRIOR YEARS, FROM WHEN THE ORIGINAL MITIGATION MEASURES WERE IN EFFECT AND PARTIALLY IMPLEMENTED.

THERE WERE CHANGES TO MITIGATION AND LEASE MEASURES TO ALIGN WITH THE 2017 CLEAN AIR ACTION PLAN, AND COMPLIANCE DATES ARE SET. THEY ARE TRIGGERED WHEN THE LEASE BECOMES EFFECTIVE RATHER THAN JUST FIXED DATES. AND, LASTLY, THE ADDITION OF STREET INTERSECTIONS AND FREEWAY SEGMENTS TO THE TRAFFIC STUDIES IN RESPONSE TO PUBLIC COMMENTS.

THE 2008 EIR ANALYZED THE CHANNEL SHIPPING -- CHINA SHIPPING TERMINAL AT FULL CAPACITY AT 1.55 MILLION TEUs. THAT WAS BASED ON CARGO FORECASTING PERFORMED IN 2005. SINCE THAT TIME, REASSESSMENT OF TERMINAL CAPACITY AND OPERATIONAL CHANGES HAVE OCCURRED. THE MAXIMUM CAPACITY IS NOW ESTIMATED AT 1.70 MILLION TEUs, WHICH IS APPROXIMATELY TEN PERCENT GREATER THAN THE ORIGINAL ESTIMATE, SO A SCREENING ANALYSIS WAS PERFORMED TO ASSESS THE INCREMENTAL INCREASE IN TEU CAPACITY FOR OTHER IMPACT AREAS. WE ALSO ADDED AN ENERGY CONSERVATION ANALYSIS AS PART OF THE REQUIREMENT BY CEQA.

SO I TALKED ABOUT BASELINE. AS MENTIONED PREVIOUSLY, BASED ON SEVERAL COMMENTS, WE CHANGED THE BASELINE. IN THE JUNE 2017 DRAFT SUPPLEMENTAL EIR, WE USED

2014 AS OUR BASELINE, BASED ON WHEN THE N.O.P WAS ISSUED. THE UPDATED ANALYSIS RELIES ON 2000 AND -- IN 2008 AS THE BASELINE TO CAPTURE THE TIME PERIOD WHEN THE PROJECT WAS ORIGINALLY APPROVED IN 2008 AND WHEN SOME MITIGATIONS WERE IN PLACE, OR WHAT WE REFER TO AS THE "PARTIAL IMPLEMENTATION PERIOD." THE 2008 ACTUAL BASELINE IS BASED ON ACTUAL CONDITIONS AS THEY OCCURRED IN 2008, WITH APPROVED MITIGATIONS THAT WERE IN PLACE AND ACTUALLY IMPLEMENTED AT THAT TIME.

THE GROUND TRANSPORTATION, WE RELIED ON THE 2014 MITIGATED BASELINE, WITH ALL THE ORIGINALLY APPROVED MITIGATIONS. 2014 IS THE APPROPRIATE YEAR FOR GROUND TRANSPORTATION BECAUSE THERE WERE NO APPROVED TRAFFIC MITIGATIONS PRIOR TO THAT TIME. BOTH BASLINES CAPTURE THE PERIOD OF PARTIAL IMPLEMENTATION OF MITIGATION MEASURES.

SO THIS LOOKS JUST LIKE THE PREVIOUS SLIDE THAT SHOWED THE MITIGATION MEASURES THAT WERE NOT FULLY IMPLEMENTED IN THE EIR, BUT THIS SLIDE SHOWS HOW WE ARE PROPOSING TO REVISE THOSE MEAUSURES. I WON'T GET INTO THE DETAILS, BUT THE MEASURES WERE REVISED TO MAKE SURE THAT THEY ARE OPERATIONALLY AND TECHNOLOGICALLY FEASIBLE AND TO DETERMINE -- AND/OR TO DETERMINE WHETHER THEY ARE STILL NEEDED.

AS I MENTIONED, SOME OF THE MITIGATION MEASURES AND LEASE MEASURES WERE REVISED TO MORE CLOSELY ALIGN WITH THE

2017 CAP UPDATE, AND COMPLIANCE STATES WERE ADJUSTED BASED ON WHEN THE LEASE AGREEMENT BECOMES EFFECTIVE RATHER THAN FIXED CALENDAR DATES. THIS IS JUST THE CONTINUATION OF THOSE MEASURES.

SO THE FDIR SHOWS THAT AIR QUALITY IMPACTS RELATED TO PEAK DAILY EMISSIONS OF VOCs, CARBON MONOXIDE, AND NOx FOR MULTIPLE STUDY YEARS OF POLLUTANT CONCENTRATIONS OF N.O.T. AND PM AND PM10 WOULD EXCEED SOUTH COAST AQMD THRESHOLDS. THE HEALTH RISKS WOULD EXCEED THE AQMD THRESHOLD OF TEN IN A MILLION AT RESIDENTIAL AND SENSITIVE RECEPTORS IN THE IMMEDIATE VICINITY OF (INAUDIBLE) SHIPPING AND TERMINALS. THE MAXIMUM INCREMENTAL INDIVIDUAL RESIDENTIAL CANCER RISK IS PREDICTED TO BE 25.4 IN A MILLION (INAUDIBLE.) GREENHOUSE GASSES WOULD EXCEED THE SOUTH COAST 10,000 METRIC TONS OF CO2 EQUIVALENT THRESHOLD.

TRAFFIC IMPACTS WOULD OCCUR AT ALAMEDA AND ANAHEIM STREETS. IF LOS ANGELES DEPARTMENT OF TRANSPORTATION APPROVES MITIGATION MEASURE MM TRANS 2, THEN THE IMPACT AT THAT LOCATION WOULD BE REDUCED TO LESS THAN SIGNIFICANT.

THERE WERE LESS THAN SIGNIFICANT IMPACTS FOR THE AREAS SHOWN. PM10, PM2.5 AND SOX IN AIR QUALITY CONCENTRATIONS ALL ACCEPT PM10 AT A NOX HANDLE TWO. THE NON-CANCER HEALTH EFFECTS AND CANCER BURDEN AS WELL AS GROUND TRANSPORTATION AT ALL STUDY LOCATIONS ACCEPT ALAMEDA AND ANAHEIM AS MEASURED.

WE ALSO IDENTIFIED CUMMULATIVE IMPACTS THAT WERE SIGNIFICANT AND UNVOIDABLE FOR AIR QUALITY AND HEALTH RISK, GREENHOUSE GASSES, GROUND TRANSPORTATION AT ALAMEDA AND ANAHEIM, AND LESS THAN SIGNIFICANT AFTERNOON MITIGATION AT JOHN S. GIBSON AT I-110 NORTHBOUND RAMPS.

SO THESE ARE THE NEW -- SOME NEW MITIGATION MEASURES. AS PART OF THE ANALYSIS, WE FOUND AN OPPORTUNITY TO ADD THREE NEW MEASURES AND MITIGATION MEASURES AND FOUR NEW LEASE MEASURES. WE REVISED SOME OF THEM TO ALIGN WITH THE 2017 CAP. THE ONE THAT I WANT TO DRAW YOUR ATTENTION TO IN PARTICULAR, AQ1, LEASE MEASURE AQ1, IS ONE WHERE WE REQUIRE AVAILABLE CARGO HANDLING EQUIPMENT AT THE TIME OF REPLACEMENT TO THE TERMINAL HAS TO COME TO THE HARBOR DEPARTMENT FIRST TO ASSURE THAT IT'S THE CLEANEST AVAILABLE, FOR THE FIRST PREFERENCE FOR ZERO EMISSIONS, SECOND PREFERENCE FOR NEAR-ZERO EMISSIONS, AND ONLY THEN, IF THOSE TWO ARE NOT AVAILABLE, FOR THE CLEANEST AVAILABLE.

THERE WILL BE AN MMRP, A MITIGATION MONITORING AND REPORTING PLAN, WHICH WILL REQUIRE DETAILED TRACKING AND MONITORING OF ALL MEASURES AS REQUIRED BY CEQA. AND THIS WILL BE -- PART OF THIS WILL BE DOCUMENTED IN COMPLIANCE STATUS REPORTS POSTED ONLINE. AND THIS MMRP WILL BE INCLUDED IN THE FINAL SUPPLEMENTAL EIR.

AS I MENTIONED, IF YOU HAVE COMMENTS, PLEASE FILL OUT A COMMENT CARD, AND JUST COMPLETE IT AND RETURN IT, AND

I'LL CALL OFF YOUR NAME. IF YOU WANT TO SEND YOUR COMMENTS TO ME BY E-MAIL, JUST SEND IT MY CEQA COMMENTS. THAT'S THE E-MAIL ADDRESS. YOU CAN SEE IT THERE ON THE BOARD. OR YOU CAN BY MAIL, SUBMIT YOUR COMMENT CARD OR LETTER BY MAIL TO THE ADDRESS ON THE NEXT SLIDE.

THE REVIEW PERIOD STARTED ON NOVEMBER OR -- EXCUSE ME -- SEPTEMBER 28. COMMENTS WILL BE RECEIVED THROUGH NOVEMBER 16. PLEASE NOTE THAT BECAUSE THE ENTIRE DOCUMENT HAS BEEN RECIRCULATED, NEW COMMENTS MUST BE SUBMITTED AND PRIOR COMMENTS RECEIVED ON THE 2017 -- THE JUNE 2017 DRAFT SUPPLEMENTAL MAY NO LONGER BE PERTINENT, BUT WILL BE PART OF THE RECORD. THERE WILL BE OTHER OPPORTUNITIES TO PARTICIPATE AND COMMENT ON THE MERITS OF THE PROPOSED CHANGES, AND THE SEIR, ITSELF, BEFORE THE BOARDS MAKE ANY DECISIONS ON THESE REVISION MEASURES.

WITH THAT, AS I SAID, WE'LL TAKE ORAL COMMENTS TO (INAUDIBLE). PLEASE FILL OUT A SPEAKER CARD, AND I'LL TAKE THEM IN THE ORDER THEY ARE RECEIVED. EACH COMMENTER WILL BE GIVEN TWO MINUTES TO SPEAK, AND ALL COMMENTS ARE BEING TRANSCRIBED BY A COURT REPORTER, WHO IS HERE. PLEASE SPEAK SLOWLY AND CLEARLY SO THAT THE COURT REPORTER WILL BE ABLE TO FOLLOW AND ACCURATELY INDICATE WHAT YOUR COMMENTS ARE. AND AS I SAID, SPANISH TRANSLATION IS AVAILABLE.

WE JUST HAVE ONE SPEAKER CARD. IT'S JESSE MARQUEZ. JESSE? JESSE, WE ALL KNOW YOU. JUST STATE YOUR NAME AND WHO

YOU ARE REPRESENTING FOR THE REPORTER.

MR. MARQUEZ: JESSE MARQUEZ, 65-YEAR RESIDENT OF WILMINGTON, CALIFORNIA, AND IT'S COALITION FOR A SAFE ENVIRONMENT.

THERE'S A COUPLE OF THINGS WE'D LIKE TO HAVE CLARIFICATION BECAUSE IT'S STILL CALLED THE CHINA SHIPPING. AND SO IS THIS A CONTRACT WITH THE CHINA SHIPPING COMPANY, OR IS THAT JUST THE TILE OF THE TERMINAL AND WHOEVER OPERATES IT UNDER THAT? THAT IS ONE THING THAT WE NEED TO HAVE CLARIFIED. PH-1

YOU ALSO TALK ABOUT -- THERE'S A STATEMENT IN THERE WHERE YOU MENTION "CLEANEST AT TIME OF REPLACEMENT." WELL, SOME PIECES OF EQUIPMENT COULD LAST, YOU KNOW, 10, 20 30, 40, YOU KNOW, YEARS, AND IT'S THEIR DISCRETION AS TO WHEN THEY MIGHT WANT TO RELACE IT. AND SO IS THERE GOING TO BE AN IMPLEMENTATION SCHEDULE WHERE THERE'S PHASE-IN AUTOMATICALLY THAT THEY HAVE TO REACH A CERTAIN GOAL OF 10 PERCENT, 20 PERCENT, OR 30 PERCENT OVER A PERIOD OF TIME? THAT IS SOMETHING THAT WE WOULD LIKE TO SEE. PH-2

AND THEN WE'D ALSO LIKE TO SEE THAT YOU INCLUDE, LIKE, A TECHNOLOGY CLEARING HOUSE. WHAT ARE THE AVAILABLE, SAY, VEHICLE AS WELL AS EQUIPMENT TECHNOLOGIES THAT ARE AVAILABLE THAT CAN OPERATE? OUR ORGANIZATION HAS BEEN PUBLISHING, SINCE THE CLEAN AIR ACTION PLAN, AN UPDATE, A MONTHLY UPDATE OF ZERO-EMISSION TECHNOLOGIES. AND IN THAT PH-3

PH-3

PH-4

PH-5

DOCUMENT IS LISTED BY EQUIPMENT AND VEHICLES SO IF YOU NEED TO LOOK UP A CLASS 8 DRAYAGE TRUCK, ON ROAD, OFF ROAD, IT HAS IT, CLASS 7, CLASS 6, CLASS 7, PANEL VANS, PICK-UP TRUCKS, WE EVEN FOUND BACKHOES ON IT. OKAY.

I DIDN'T SEE ANYTHING IN REGARDS TO ANY ENVIRONMENTAL JUSTICE UPDATES, SO WE WOULD LIKE TO SEE IF THERE IS ANYTHING IN THAT REGARD.

YOU HAD MENTIONED ALAMEDA CORRIDOR AS, YOU KNOW, SOME FREIGHT ROUTES. I'D LIKE TO BRING YOUR ATTENTION THAT, YOU KNOW, WE HAD IDENTIFIED IN PREVIOUS EIRs AS WELL AS IN THE HARBOR COMMUNITY BENEFIT FOUNDATION, A REPORT THAT THERE ARE OVER 100 CONTAINER STORAGE YARDS IN WILMINGTON, SO WE HAVE VARIOUS STREETS THAT HAVE NOW BECOME TRUCK ROUTES TO AND FROM THOSE CONTAINER STORAGE YARDS. AND THEY HAVE ALSO GROWN FROM JUST BEING CONTAINER STORM YARDS; SOME ACTUALLY ARE NOW CHASSIS STORAGE YARDS, YOUR TRUE GENSET STORAGE YARDS, AS WELL AS MAINTENANCE AND REPLACEMENT. AND SO WE'D LIKE TO SEE THOSE ADDRESSED AS WELL. THANK YOU.

MR. CANNON: THANK YOU.

SINCE THAT'S THE ONLY SPEAKER CARD THAT I HAVE, I WANT TO GIVE YOU AN OPPORTUNITY -- ANYBODY AN OPPOURTINITY TO SPEAK IF THEY HAVEN'T DONE SO OR WOULD LIKE TO FILL OUT A CARD.

OKAY. SEEING NONE, THEN I WILL CALL THE CHINA SHIPPING SUPPLEMENTAL EIR RECIRCULATED SUPPLEMENTAL EIR

HEARING TO A CLOSE. THANK YOU FOR COMING TODAY.

(HEARING CONCLUDES AT 6:15 P.M.)

REPORTER'S CERTIFICATE

I, OLIVIA D. LIZARRAGA, C.S.R. NO. 13475, A CERTIFIED SHORTHAND REPORTER FOR THE STATE OF CALIFORNIA, DO HEREBY CERTIFY:

THAT SAID PROCEEDING WAS TAKEN BEFORE ME AT THE TIME AND PLACE SET FORTH AND WAS TAKEN DOWN BY ME IN SHORTHAND AND THEREAFTER REDUCED TO COMPUTERIZED TRANSCRIPTION UNDER MY DIRECTION AND SUPERVISION; AND I HEREBY CERTIFY THE FOREGOING IS A FULL, TRUE AND CORRECT TRANSCRIPT OF MY SHORTHAND NOTES SO TAKEN.

I FURTHER CERTIFY THAT I AM NEITHER COUNSEL FOR NOR RELATED TO ANY PARTY TO SAID ACTION NOR IN ANY WAY INTERESTED IN THE OUTCOME THEREOF.

IN WITNESS WHEREOF, I HAVE HEREUNTO SUBSCRIBED MY NAME THIS 12TH DAY OF NOVEMBER, 2018.

OLIVIA D. LIZARRAGA
CERTIFIED SHORTHAND REPORTER NO. 13475

CERTIFIED COPY CERTIFICATE

I, OLIVIA LIZARRAGA, CERTIFIED SHORTHAND REPORTER, NO. 13475, HEREBY CERTIFY THAT THE ATTACHED IS A CORRECT AND CERTIFIED COPY OF THE PROCEEDING, TAKEN BEFORE ME AT THE TIME AND PLACE THEREIN STATED.

I DECLARE UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT.

EXECUTED AT COVINA, CALIFORNIA THIS 12TH DAY OF NOVEMBER, 2018.

OLIVIA LIZARRAGA, C.S.R. NO 13475

Response to Comment PH-1

As described in Section 1.2.3.4 of the Recirculated DSEIR and Section 3.2.1 of the FSEIR, China Shipping North America Holding Co., Ltd (China Shipping) is the current leaseholder of the terminal at Berths 97-107 (the CS Terminal). West Basin Container Terminal Company (WBCT) operates the CS Terminal under contract with China Shipping or its parent company.

Response to Comment PH-2

The strategy for phasing newer equipment into the CS Terminal is described in the Recirculated DSEIR in mitigation measures MM AQ-15 and MM AQ-17 and in lease measure LM AQ-1. These measures ensure that in the near term the terminal transitions to equipment meeting either low-NO_X and EPA Tier 4 standards or, in the case of minor components, other standards such as zero emission or diesel-electric hybrids. The mitigation measures specify schedules for the transition based upon equipment model year.

Response to Comment PH-3

It is unclear what the comment means by "a technology clearing house". However, the Port has a Technology Advancement Program (described in the 2017 CAAP and at http://www.cleanairactionplan.org/technology-advancement-program/) that tracks developments in various technologies relevant to port operations, including zero-emissions terminal equipment, and promotes their further development and commercialization. In addition, lease measure LM AQ-1 commits the CS Terminal to frequent reviews of the feasibility of zero-emission cargo-handling equipment and to adopting those that are found to be feasible.

Response to Comment PH-4

Environmental Justice is not a CEQA issue; accordingly, the Recirculated DSEIR does not include a consideration of environmental justice.

Response to Comment PH-5

Please see Response to Comment CFASE-18.

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