



South Coast Air Quality Management District

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SENT VIA E-MAIL, USPS, AND ONLINE:

December 4, 2019

Clerk.CPS@lacity.org

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<https://cityclerk.lacity.org/publiccomment/>

City of Los Angeles City Council

Office of the City Clerk

200 N. Spring Street

City Hall - Room 360

Los Angeles, CA 90012

RE: CEQA Appeal from the Board of Harbor Commissioners' Decision to Approve the Final Supplemental Environmental Impact Report (SEIR) for the Berths 97-109 (China Shipping) Container Terminal Project (SCH No.: 2003061153)

Dear Members of the City Council,

Pursuant to the California Public Resources Code Section 21151(c), South Coast Air Quality Management District (South Coast AQMD) staff appeals the Board of Harbor Commissioners' (Board) decision on October 8, 2019 to certify the Final Supplemental Environmental Impact Report (SEIR) for the Berths 97-109 (China Shipping) Container Terminal project (project) prior to approving the project^{1,2,3}. South Coast AQMD staff asks that the City Council overrule the Board's October 8, 2019 decision and reject the certification of the Final SEIR and approval of the project⁴. This CEQA appeal is made on the following procedural and CEQA grounds.

Procedural Grounds for Appeal

The CEQA appeal is made pursuant to California Public Resources Code Section 21151(c), which provides that:

¹ Los Angeles Board of Harbor Commissioners. October 8, 2019. Board Resolution No.: 19-9548. *1st Special Meeting Minutes: Item 2 Resolution No. 19-9548 – Final Supplemental Environmental Impact Report for the Berths 97-109 (China Shipping) Container Terminal Project (App No. 150224-504; SCH No. 2003061153)*. Accessed at: https://docs.google.com/gview?url=https%3A%2F%2Fportofla.granicus.com%2FDocumentViewer.php%3Ffile%3Dportofla_abc320b5b73d2ac3087b95c04bbd0246.pdf%26view%3D1&embedded=true.

² Los Angeles Harbor Department (LAHD). October 2019. *Findings of Fact and Statement of Overriding Considerations. Berths 97-109 (China Shipping) Container Terminal Project Supplemental Environmental Impact Report (SCH No. 2003061153, App No. 150224-504)*. Accessed at: https://kentico.portoflosangeles.org/getmedia/4dd3fc68-3998-4474-a545-5d01db919887/CS_Final_FSOC_FSEIR.

³ LAHD. October 2019. *Final Supplemental Mitigation Monitoring and Reporting Program. Berths 97-109 [China Shipping] Container Terminal Project Supplemental Environmental Impact Report (SCH No. 2003061153, App No. 150224-504)*. Accessed at: https://kentico.portoflosangeles.org/getmedia/f04712f8-6f4f-4488-87a1-924bf2e6cddc/CS_Final_MMRP_FSEIR.

⁴ Los Angeles Board of Harbor Commissioners. October 8, 2019. Board Resolution No.: 19-9548.

“If a nonelected decision-making body of a local lead agency certifies an environmental impact report, approves a negative declaration or mitigated negative declaration, or determines that a project is not subject to this division, that certification, approval, or determination may be appealed to the agency’s elected decision-making body, if any.”

The Board is a nonelected decision-making body of the City. The Board consists of commissioners appointed by the Mayor of Los Angeles⁵. The City Council is an elected decision-making body of the City that consists of 15 members elected by districts⁶. On October 8, 2019, the Board certified the Final SEIR and approved the project. Therefore, the Board’s certification and approval may be appealed to the City Council.

Where an agency allows administrative appeals upon the adequacy of an environmental document, an appeal shall be handled according to the procedures of that agency (CEQA Guidelines Section 15185(a)). The City does not provide a procedure for filing CEQA appeals of environmental determinations made by the Board under Cal. Pub. Resources Code 21151(c). The only procedure for filing CEQA appeals is set forth in the Los Angeles Municipal Code Section 197.01. Effective September 24, 2019, Section 197.01 establishes a procedure for filing CEQA appeals of environmental determinations made by a nonelected decision-making body and specifies that the appeals must be filed within 10 days following the filing of a Notice of Determination (NOD)⁷. However, Section 197.01 does not apply to the CEQA appeals of the environmental determinations made by the Board. The ordinance provides that it does not apply to departments established by Charter Section 600, which includes the Harbor Department (LAHD). Therefore, the CEQA appeal of the Board’s environmental determination to certify the Final SEIR and approve the project is not subject to the procedural requirements under the Los Angeles Municipal Code Section 197.01.

The CEQA appeal is made pursuant to CEQA Guidelines Section 15090(b), which provides that:

“When an EIR is certified by a non-elected decision-making body within a local lead agency, that certification may be appealed to the local lead agency’s elected decision-making body, if one exists. [...] Each local lead agency shall provide for such appeals.”

Since the LAHD is governed by the Board, but is subordinate to the City Council, CEQA requires that an appeal to the City Council be available. Therefore, we file this appeal under the requirements of CEQA itself, which does not specify a time limit for filing an appeal.

The CEQA Guidelines specify a time limit for filing court challenges under Section 15094(g), which provides that:

“The filing of the notice of determination [...] start[s] a 30-day statute of limitation on court challenges to the approval under CEQA.” (See also CEQA Guidelines Section 15112).

⁵ The Port of Los Angeles. Accessed at: <https://www.portoflosangeles.org/about>.

⁶ City of Los Angeles. Elected Official Offices. Accessed at: <https://www.lacity.org/your-government/elected-official-offices>.

⁷ Ordinance No. 186254. Effective September 24, 2019. Accessed at: http://clkrep.lacity.org/onlinedocs/2014/14-0090-S1_ORD_186254_09-24-2019.pdf.

The CEQA appeal of the Board's environmental determination and approval of the project is an administrative appeal to the City Council. It is not a court challenge. Therefore, the CEQA time limit for filing court challenges does not apply to this appeal.

Moreover, the CEQA decision is not yet final so the time for filing a court challenge has not yet begun to run. The Natural Resources Defense Council (NRDC) has already filed an appeal to the City Council. The CEQA decision will become final only after the City Council, an elected decision-making body, hears the appeal and makes a decision on the appeal. Since the City has not provided a CEQA appeal process for decisions of the Board, the present appeal is not barred by any applicable time limit. Nor is there any prejudice to the City in setting this appeal for hearing due to the timing of filing this appeal, since the City has not yet set the NRDC appeal for hearing.

CEQA Grounds for Appeal

The CEQA appeal is made on the following CEQA grounds, as well as the grounds in the South Coast AQMD staff's comment letters on the Draft SEIR⁸, the Recirculated Draft SEIR⁹, and the Final SEIR¹⁰, each of which is attached for your reference in Exhibits A, B, and C, respectively.

The Final SEIR is inadequate and fails to comply with the requirements of CEQA and the CEQA Guidelines because the Final SEIR does not implement all feasible mitigation measures, including the air quality mitigation measures required by the 2008 Environmental Impact Report (EIR) and does not propose new mitigation measures to reduce the more severe significant adverse air quality and health risk impacts resulting from the revised project. Under CEQA, a mitigation measure must be required in, or incorporated into, the project (CEQA Guidelines Sections 15091(a) and (d)). Mitigation measures must also be fully enforceable through permit conditions, agreements, or other measures (CEQA Guidelines Section 15126.4(a)(2)). As a landlord for the China Shipping terminal and the Lead Agency for the project, the LAHD has the responsibility of mitigating the project's significant adverse air quality and health risk impacts (CEQA Guidelines Section 15041). Based on the 2008 EIR, the project's emissions exceeded the CEQA significance thresholds for NO_x, CO, VOC, PM₁₀, and PM_{2.5} and mitigation measures were adopted by the Board to reduce those significant impacts. However, the LAHD failed to implement those mitigation measures and the project has been allowed to operate without meeting its commitments to reducing the air quality impacts. The Final SEIR removes key feasible mitigation measures that were previously adopted and required under CEQA to reduce the project's significant adverse air quality and health risk impacts without adequate substitute measures or additional measures. Furthermore, the revised project is seeking to increase its cargo throughput, adding more emissions to an already significant impact. For NO_x, the emissions from the project in 2008 exceeded the significance threshold up to 135 times¹¹ and this will increase in the Final SEIR to 159 times¹². Instead of adding to or

⁸ South Coast AQMD. September 29, 2017. Accessed at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2017/dseir-chinashipping-092917.pdf>.

⁹ South Coast AQMD. November 30, 2018. Accessed at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2018/LAC181002-11.pdf>.

¹⁰ South Coast AQMD. October 4, 2019. Accessed at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/october/LAC190905-02.pdf>.

¹¹ Recirculated Draft EIR. 2008. Page 3.3-88.

¹² Draft Recirculated SEIR. 2018. Page 3.1-4.

strengthening the existing air quality mitigation measures that were required under CEQA in the 2008 EIR, the Final SEIR removes and weakens the required mitigation measures that the LAHD was responsible for implementing, affecting an area heavily impacted by air pollution, which also happens to be an AB 617 community. Therefore, the Final SEIR does not meet the requirements of CEQA for implementing all feasible mitigation measures (CEQA Guidelines Sections 15091(a) and (d), and 15126.4(a)(1)).

The Final SEIR is also inadequate and fails to comply with the requirements of CEQA and the CEQA Guidelines because it violates CEQA's requirement for enforceable mitigation measures. The LAHD relies on the tenant to meet its legal obligation to mitigate significant air quality impacts under CEQA. However, the lease amendment process appears to be the only legal and viable mechanism for the LAHD to enforce the Board-adopted mitigation measures in the Final SEIR. When the Board considered certification of the Final SEIR and approval of the project on October 8, 2019, the lease amendment was not part of the Final SEIR or the project. There was no assurance to the public that the tenant will enter into a binding and enforceable agreement with LAHD to implement the Final SEIR, nor whether the LAHD has the authority to render the identified mitigation measures enforceable. Based on the tenant's October 7, 2019 letter to the LAHD that was distributed to the public at the October 8, 2019 Board meeting¹³, it is anticipated that the tenant will not agree to amend the lease agreement to implement the required mitigation measures due to the operational, commercial and financial feasibility concerns¹⁴. Because the Final SEIR was certified before there was an enforceable commitment by the tenant to mitigate significant air quality impacts, the Final SEIR does not meet the requirements of CEQA for enforceable mitigation measures (CEQA Guidelines Sections 15091(a) and (d) and 15126.4(a)(2)).

The LAHD's response to South Coast AQMD staff's comments on the Final SEIR, dated October 4, 2019, was conclusory and non-responsive. CEQA requires that issues raised in comments should be addressed in detail giving reasons why specific comments and suggestions are not accepted. There should be good faith, reasoned analysis in the response. When the Lead Agency makes the finding that the additional recommended mitigation measures are not feasible, the Lead Agency should describe the specific reasons for rejecting them (CEQA Guidelines Section 15091(c)) and those reasons must be supported by substantial evidence in the record (CEQA Guidelines Sections 15091(a) and (b)). In South Coast AQMD staff's comment letter on the Final SEIR, South Coast AQMD staff recommended that the LAHD establish a mitigation fee program that would be separate from and in addition to the greenhouse gas credit fund to implement the required mitigation measures to reduce the project's criteria pollutants emissions if the tenant does not agree to amend the lease agreement to incorporate the Board-adopted mitigation measures for implementation¹⁵. However, in the LAHD's response letter that was distributed to the public at the October 8, 2019 Board meeting, the LAHD failed to provide an explanation, supported by substantial evidence in the record, as to why the mitigation fee program was not feasible or adopted in the findings¹⁶. When the LAHD does not have other mechanisms to obligate the tenant to agree

¹³ Cosco Shipping (North America) Inc. October 7, 2019. A letter to the City of Los Angeles Harbor Department (Mr. Chris Cannon). Distributed at the Los Angeles Board of Harbor Commissioners Special Meeting on October 8, 2019.

¹⁴ *Ibid.*

¹⁵ South Coast AQMD. October 4, 2019. Page 3. Accessed at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2019/october/LAC190905-02.pdf>.

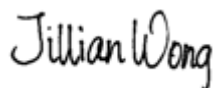
¹⁶ LAHD. October 8, 2019. *Response to South Coast Air Quality Management District Letter on Final Supplemental Environmental Impact Report for Berths 107-109 [China Shipping] Container Terminal Project (SCH No.*

to lease amendments, the mitigation fee program is an equally effective or superior mechanism to implement the required mitigation measures. Since there was no finding on the mitigation fee program, the Board did not review or consider it prior to certifying the Final SEIR and approving the project, and the Final SEIR has not been completed in compliance with CEQA (CEQA Guidelines Sections 15090 and 15091).

In conclusion, the Final SEIR is inadequate in reducing the significant and more severe air quality impacts and does not meet the requirements of CEQA (CEQA Guidelines Sections 15002(a)(3), 15003(f), 15041, 15090, 15091(a) and (d), 15126.4(a)(1) and (a)(2), and 15185(a)). South Coast AQMD staff asks that the City Council overrule and reject the Board's October 8, 2019 certification of the Final SEIR and approval of the project. South Coast AQMD staff also asks that the City Council direct the Board to establish a mitigation fee program that is separate from and in addition to the greenhouse gas credit fund to reduce the project's emissions from criteria pollutants such as NOX, PM10, and PM2.5. The mitigation fee program can be used to incentivize and accelerate turnover of trucks and cargo handling equipment to be zero emissions and that program should be made available to all tenants at Port of Los Angeles, including China Shipping.

We appreciate your consideration of this appeal. We look forward to a full hearing before the City Council. Please feel free to call me at (909) 396-3176 if you have questions or wish to discuss our comments.

Sincerely,



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

Enclosures:

Exhibit A: South Coast AQMD staff comments on the Draft SEIR, dated September 29, 2017

Exhibit B: South Coast AQMD staff comments on the Recirculated Draft SEIR, dated November 30, 2018

Exhibit C: South Coast AQMD staff comments on the Final SEIR, dated October 4, 2019

Exhibit A



South Coast Air Quality Management District

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SENT VIA E-MAIL & USPS:

September 29, 2017

ceqacomment@portla.org

City of Los Angeles Harbor Department
Environmental Management Division
ATTN: Mr. Christopher Cannon, Director
P.O. Box 151
San Pedro, CA 90731

**Draft Supplemental Environmental Impact Report (DSEIR) for the
Berths 97-109 [China Shipping] Container Terminal Project (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 Project (Revised Project). SCAQMD staff understands that the Revised Project is an important project for the Port of Los Angeles (Port) and acknowledges the challenges associated with implementing some mitigation measures by terminal operators, but is concerned that this DSEIR is backing off of the Port's CEQA obligation to implement all feasible measures to mitigate air quality impacts. Our comments seek a SEIR that fully discloses air quality impacts, and that ensures implementation of all feasible measures such as zero or near-zero emission trucks and equipment to mitigate significant impacts.

The SCAQMD has a long history of working with the ports to ensure implementation of the cleanest technologies. SCAQMD staff's comments on the China Shipping Container Terminal project, dated July 15, 2008, included recommendations to strengthen mitigation measures and accelerate implementation of zero or near-zero technologies¹. Approved by the Los Angeles Harbor Commission (LAHC) nearly ten years ago, the Port was committed to implementing mitigation measures that would reduce significant air quality impacts. However, the Port is now proposing to revise 10 of 52 mitigation measures that were approved in 2008 for the Project, six of which are directly targeted towards reducing air quality impacts. This reverses the previous commitment to reducing emissions, particularly NOx emissions, while the Project's air quality impacts become more severe. The Revised Project, if approved, would not include Mitigation Measure (MM) AQ-20, which had previously required the Port to phase in liquefied natural gas (LNG)-powered drayage trucks arriving at and departing from the terminal². Notably, only six percent of truck calls operated by West Basin Container Terminal (Terminal), including the Revised Project, were made by LNG-fueled trucks, and a Port-wide average of LNG-powered drayage trucks was 10 percent.³ This indicates a lack of commitment by the project applicant towards implementing adopted mitigation, especially MM AQ-20, and a failure of the Port to

¹ South Coast Air Quality Management District. July 15, 2008. *Staff Comments*. Accessed at: [http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2008/july/berth-97-109-\(china-shipping\)-container-terminal-project.pdf](http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2008/july/berth-97-109-(china-shipping)-container-terminal-project.pdf).

² *DSEIR*. Executive Summary. Page ES-9.

³ *Ibid*. Chapter 2, *Project Description*. Page 2-4.

enforce the measures. Furthermore, the Revised Project is not consistent with the Port's air quality commitment to use cleaner trucks.

The Revised Project plays an important role in supporting the Port's commitment to a zero-emissions goods movement future as outlined in the draft San Pedro Bay Ports Clean Air Action Plan 2017 Update (2017 CAAP Update)⁴. It is also critical to attaining the National Ambient Air Quality Standard (NAAQS). On March 3, 2017, the SCAQMD's Governing Board adopted the 2016 Air Quality Management Plan (2016 AQMP)⁵, which was later approved by the California Air Resources Board of Directors on March 23rd. Built upon the progress in implementing the 2007 and 2012 AQMPs, the 2016 AQMP provides a regional perspective on air quality and lays out the challenges facing the South Coast Air Basin. The most significant air quality challenge in the Basin is to achieve an additional 45 percent reduction in nitrogen oxide (NOx) emissions in 2023 and an additional 55 percent NOx reduction beyond 2031 levels for ozone attainment.

However, the Port is allowing the Revised Project to reverse previous commitments through CEQA to mitigate significant air quality impacts. This will likely delay the implementation of zero or near-zero emission trucks and equipment at the Terminal and potentially throughout the Port. As shown in Table 3.1-5 of the DSEIR, the Project is already emitting more NOx per day in 2014 than it should be, had the Port implemented all of the mitigation measures that they committed to in 2008. The emission reductions already foregone, if continued into the future, would substantially hinder the South Coast Air Basin's ability to meet the NAAQS, in particular the upcoming critical attainment date of 2023 for federal ozone standards. The SCAQMD is committed to attaining the ozone NAAQS as expeditiously as practicable, and the SCAQMD's commitment relies on commitments made by the Port and others to ensure that emission reductions occur on time. Therefore, SCAQMD staff urges the Port to keep the commitment to near-zero emission trucks and equipment at the Terminal and pursue integration of zero emission technologies into Port-related goods movement. This will help ensure that the Revised Project contributes its fair share to reducing air pollution and advancing the mayors' vision of a zero-emissions good movement future.

SCAQMD staff is concerned about the Revised Project's impacts on the nearby community that are already heavily affected by the existing truck activities to and from the Port. The Revised Project will result in a maximum incremental individual cancer risk of 28 in a million, which is nearly three times greater than SCAQMD's CEQA threshold of 10 in a million⁶. Additionally, the SCAQMD's Multiple Air Toxics Exposure Study (MATES IV), completed in May 2015, concluded that the largest contributor to cancer risk from air pollution is diesel particulate matter emissions, and that the areas around the Port of Los Angeles and the Port of Long Beach is significantly impacted with some of the highest risks from air pollution in the region with a maximum simulated cancer risk of 1,057 in a million⁷. When the health impacts from the Revised

⁴ San Pedro Bay Ports. July 2017. *Clean Air Action Plan 2017 Update Draft*. Accessed at: <http://www.cleanairactionplan.org/2017-clean-air-action-plan-update/>.

⁵ South Coast Air Quality Management District. March 3, 2017. *2016 Air Quality Management Plan*. Accessed at: <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan>.

⁶ *Ibid.* Chapter 3.1, *Air Quality and Meteorology*. Page 3.1-63.

⁷ South Coast Air Quality Management District. May 2015. *Multiple Air Toxics Exposure Study in the South Coast Air Basin*. Accessed at: <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf>.

Project are added to those existing impacts, the community will face an even greater exposure to air pollution and bear a disproportionate burden of increasing health risks.

The Revised Project is an important and significant project for the Port and the region. The Port should use this Project as an opportunity to take more aggressive actions to accelerate zero emission vehicles and equipment that are expected in the life of the Revised Project. Attachment A includes additional information regarding zero emission technologies. To ensure successful implementation of the strategies in the proposed 2017 CAAP Update, SCAQMD staff recommends that the Port update their emissions reduction targets for this Terminal to be consistent with the air quality attainment goals and timelines of the 2016 AQMP and include implementation schedules and criteria for setting and assessing the targets.

Since the LAHC approved the Project in 2008, there have been substantial improvements to the zero emission technologies. The ports prepared two reports, *Roadmap for Zero-emissions – Technical Report*⁸ and the *Draft Zero Emission White Paper*⁹ in 2011 and 2015, respectively. In both reports, the ports laid out a framework and identified a pathway for transitioning to a zero-emission goods movement future. As discussed in the 2015 Draft Zero Emission White Paper Appendix 1 and Appendix 2, the Port of Los Angeles has made progress towards completing projects that support zero and near-zero truck technologies before 2015, and is co-funding ongoing technology development projects for zero emission electric yard tractors, plug-in hybrid electric vehicle (PHEV), zero emission electric-battery drive system for heavy-duty drayage trucks, electric drive technology for yard tractors, zero emission drayage trucks with fuel cell range extenders, and two hybrid electric drayage trucks. The reports not only provided information to show that zero emission technologies were already available, but also identified funding programs to support zero emission technology implementation at the Port. For example, the Proposition 1B Goods Movement Emission Reduction Program has incentive funds available for zero emission cargo handling equipment (CHE)¹⁰. The SCAQMD's Greenhouse Gas Reduction Fund (GGRF) is available for usage to develop and demonstrate zero emission drayage trucks at the Port¹¹. When both zero emission technologies and funding are available and have been demonstrated to be feasible, the Port can and should do more now to advance and accelerate zero emission vehicles and equipment for this Terminal.

SCAQMD staff has reviewed the air quality and health risk analyses in the DSEIR, and SCAQMD staff has concerns about the CEQA baseline and criteria pollutant calculations, the feasibility analysis, and the modeling parameters and meteorological data used. By using a 2014 CEQA baseline, the Lead Agency may have substantially underestimated and underrepresented the Revised Project's potential significant adverse air quality impacts. Based on the SCAQMD staff's calculations, the Revised Project would exceed SCAQMD's regional air quality CEQA

⁸ "Final Roadmap for Moving Forward with Zero Emission Technologies at the Ports of Long Beach and Los Angeles." Updated August 2011. Accessed at: https://www.portoflosangeles.org/pdf/Zero_Emissions_Road_Map.pdf.

⁹"Draft Zero Emission White Paper." July 2015. Accessed at: https://www.portoflosangeles.org/pdf/Zero_Emissions_White_Paper_DRAFT.pdf.

¹⁰California Air Resources Board. Goods Movement Emission Reduction Program. Accessed at: <https://arb.ca.gov/bonds/gmbond/gmbond.htm>.

¹¹ SCAQMD. March 4, 2016. The SCAQMD Board Meeting Agenda Item No. 4. Accessed at: <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2016/brdpgk-2016-mar4.pdf>.

significance thresholds for operation¹². Therefore, the Lead Agency should consider mitigation measures to reduce those impacts to the maximum extent feasible. In addition, the DSEIR identifies that the Revised Project will result in a significant impact to AQ-4 (localized PM10 concentrations), AQ-7 (toxic air contaminants), and GHG-1 (Greenhouse Gas emissions). SCAQMD staff recommends additional mitigation measures that can apply to many emissions sources and would be similar to the ports' existing Green Construction Policy using a step-down program for phasing in zero or near-zero emission drayage trucks and replacing cargo handling equipment at the Terminal. The proposed measures have the potential to reduce all identified significant operational air quality impacts to a level below significance. The recommended mitigation measures are guidance for the Lead Agency and should be incorporated into the Final SEIR. Additional details are included in the Attachment B.

Thank you for the opportunity to provide comments on the DSEIR. We look forward to working with the Port to address the comments raised herein and any other questions that may arise. Please feel free to call me at (909) 396-3105, if you have questions or wish to discuss our comments.

Sincerely,



Susan Nakamura
Assistant Deputy Executive Officer
Planning, Rule Development & Area Sources

Attachments
LAC170616-02
Control Number

¹² The SCAQMD's air quality CEQA regional pollutant emissions significance thresholds can be found here: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.

ATTACHMENT A

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.

Overhead Catenary Truck Project

Project Description

Siemens Mobility is working with Volvo to integrate a pantograph system into a Class 8 heavy duty trucks. Siemens has designed and provided an adaptable pantograph system that will allow seamless connection and detachment from the catenary power source, while the vehicle is mobile. A catenary track of approximately one mile segment has been installed along Alameda Street in the city of Carson, extending north to south from E. Lomita Blvd to the Dominguez Channel. Corresponding with the operational range of the pantograph, two parallel catenary wires are installed above the roadway one mile in each direction. The connection to the grid occurs at the middle of the system where a power supply has been placed.

In addition to the Volvo truck, TransPower also developed and delivered two drayage trucks with catenary accessibility. The first truck is an existing vehicle that utilizes a battery electric drive system and has been converted to operate on the catenary system. The second truck is a CNG-hybrid truck that incorporates TransPower electric drive system on a major OEM chassis. TransPower has integrated pantographs and associated components into both vehicles. Specifically, they modified one truck currently being built with their electric drive system to operate on catenary power. The current electric truck has two 150 kW motors and 700 Ah battery pack (modified truck will have a 300 Ah battery pack). Integrating the pantograph system enabled the truck to operate on wayside power while also recharging the batteries. The second truck is new truck with a CNG hybrid drive system architecture that enables the vehicle to operate in three modes –battery-only, catenary and CNG to extend the operating range. The battery-only mode will allow the truck to have a short AER to operate without the engine for short durations while the CNG hybrid allows the truck to have regional applicability as well.

Cost

The incremental cost of the catenary battery electric truck over 8.9 L natural gas truck is approximately \$250,000. This is based on limited production, however, and full production is anticipated to result in reduced costs.

Timeline and Commercialization

The project vehicles and infrastructure has been developed and is currently undergoing a 6-month demonstration with completion date by Q4 2017. Based on the project outcome, a Phase 2 demonstration with a longer track and subsequent commercialization may be considered.



TransPower Catenary Truck on the OCS Track



Volvo Catenary Truck

2012 DOE Zero Emission Cargo Transport Demonstration Project (ZECT I)**Project Description**

With an award of approximately \$4.2 million from the DOE in 2012, SCAQMD has contracted two local EV integrators, TransPower and US Hybrid, to develop and demonstrate a total of 11 zero emission capable heavy-duty drayage trucks, based on four different architectures, consisting of two battery electric vehicles and two plug-in hybrid electric drivetrains with AER capability. These trucks are deployed in real world drayage operations with fleet partners operating at the Ports of Los Angeles and Long Beach for demonstration up to two years. Vehicle performance and operational data is being collected and analyzed by National Renewable Laboratory (NREL) to evaluate both technical feasibility and market viability of the technologies to support drayage operations. The four demonstration technologies are summarized as follows:

Battery Electric Trucks (BETs)

- a. TransPower developed four Class 8 BETs on International Prostar chassis, incorporating improvements and lessons learned from the operation of their prototype, ElecTruck. The drive system is powered by a dual motor unit, rated at 300 kW and the trucks are equipped with an innovative Inverter-Charger Unit (ICU) that combines the function of both vehicle inverter and battery charger. TransPower has installed an automated manual

transmission with proprietary software to control the transmission shift mechanism, enabling operation in multiple gears to maximize vehicle efficiency. The battery pack can provide 215 kWh of energy to support 70-100 miles in operating range and can be fully recharged within 3 hours. These trucks have been in revenue service, meeting the daily duty cycle needs of the trucking companies.

- b. US Hybrid also developed two BETs on International Prostar chassis. Each vehicle is equipped with a 320kW traction motor, powered by a 240 kWh battery pack with lithium-ion cells for highly efficient and reliable performance, capable of 70-100 miles of operating range per charge. A 60 kW on-board charger is capable of fully recharging the truck within 3-4 hours. These trucks have also been in revenue service with local fleet operators.

Plug-In Hybrid Electric Trucks (PHETs)

- c. Two Class 8 PHETs are being developed by TransPower with a targeted operating range of 150-200 miles, including 30-40 all-electric miles. The hybrid technology is based on the ElecTruck™ system TransPower has developed for their BETs, augmented with a CNG auxiliary power unit for extended range and power. TransPower is utilizing commercially available and widely used components, including Ford 3.7L CNG engine-generator, to ensure that these trucks are cost-competitive and well-positioned for commercialization. As in their BETs, these trucks are equipped with a 300 kW traction motor with an automated transmission. A 115 kWh battery pack on-board will support zero emission operations when traveling through the communities around the Ports that are heavily impacted by diesel traffic and activities.
- d. US Hybrid is also developing three Class 8 PHETs for demonstration in this project. US Hybrid converted exiting LNG trucks with 8.9L ISLG engine into PHETs with all-electric range capability. The hybrid system is designed to provide comparable power and torque to those from larger Cummins 12L engines to support a full range of drayage operations. The trucks are capable of providing a combined power of 600 HP between the LNG engine and a 223 kW traction motor, with a targeted operating range of 250 miles, including 30-40 miles in all-electric range. Two of these trucks are currently deployed in drayage service with local fleet operators.

Cost

The incremental cost of the BETs over a natural gas truck is approximately \$200,000, and the incremental cost of the PHETs is estimated to be around \$250,000. These estimates are based on limited productions, and the costs are expected to be substantially reduced in larger volume production.

Timeline and Commercialization

Seven of the 11 demonstration trucks are currently in deployment with participating fleets at the Ports. The remaining trucks are expected to be deployed soon and the overall project will be completed by Q3 2018. Overseas truck OEMs have commercial products that are already eligible for incentive funding from the state, such as the HVIP, and other truck OEMs are anticipating commercialization pathways by 2019.



TransPower BETs



US Hybrid PHET



US Hybrid BET

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

Project Description

In August 2014, the 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

The incremental cost of the FCREs and the PHET over 8.9 L natural gas truck is estimated to be \$250,000 or higher. These estimates are based on limited productions, and the costs will be substantially reduced in full production, and state incentives funds are anticipated for the trucks and associated refueling infrastructure.

Timeline and Commercialization

The demonstration phase of this project is expected to start by Q1 2018 with at least two trucks, one each from TransPower and US Hybrid. The project is set to be completed by Q3 2019 and the commercialization of these truck technologies can be expected after 2019.

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. The 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 3-4 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 80 to 100 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 to 150 miles of operation per charge with a 311 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 250 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 for zero emission operations in the most heavily emissions-impacted communities. 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

The incremental cost of the BETs over 8.9 L natural gas truck ranges from \$150,000 to \$200,000. No estimate is available for the Kenworth or Volvo PHETs. As noted earlier, the cost estimates are based on limited production, and the costs are expected to be substantially reduced once these trucks reach a full-production phase.

Timeline and Commercialization

The demonstration phase of this project is expected to start by Q4 2017 with BYD trucks and the rest to follow over time throughout 2018 and 2019. This project is set to be completed by Q2 2020 and the commercialization of these truck technologies can start as early as 2019 for BYD trucks with the rest taking place in the 2020-2021 timeframe.



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 but it 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 2020 and the commercialization of these truck technologies can be expected in the 2021-2022 timeframe.

ATTACHMENT B

SCAQMD Staff's Summary of Project Description

SCAQMD staff understands that the Revised Project involves continued operation of the China Shipping (CS) 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 EIS/EIR to 1,698,504 TEUs estimated for years 2030 and 2036-2045 in the DSEIR. The CS Container Terminal lease with the Los Angeles Harbor Department (Lead Agency) will expire in year 2045.

SCAQMD Staff's Summary of Air Quality and Health Risk Assessment (HRA) Analyses

In the air quality analyses, the Lead Agency found that the Revised Project would have a significant and unavoidable impact related to carbon monoxide (CO) impacts during operations for all four years analyzed (2023, 2030, 2036 and 2045)¹³. In addition, a significant and unavoidable localized impact was determined for ambient concentrations of PM₁₀ (annual average) for years 2023, 2030, 2036 and 2045. However, the Lead Agency found that the Revised Project's emissions from VOCs, NO_x, PM₁₀, PM_{2.5}, and SO_x would not exceed SCAQMD's air quality CEQA significance thresholds¹⁴. The Revised Project would result in a significant and unavoidable impact related to toxic air contaminants (TACs) for residential, occupational, and sensitive receptor types¹⁵. The main sources of TACs from Revised Project operations would be diesel particulate matter (DPM) emissions from container ships, tugboats, cargo handling equipment, locomotives, and most importantly trucks.

After a review of the air quality and health risk analyses and supporting technical documents in the DSEIR, SCAQMD staff has comments as follows. Pursuant to Public Resources Code Section 21092.5 and CEQA Guidelines Section 15088, SCAQMD staff requests that the Lead Agency provide SCAQMD with written responses to all comments prior to the certification of the Final SEIR.

CEQA Baseline

1. The DSEIR should include a realistic baseline which accurately reflects the improvements in air quality that will occur, independent of the Revised Project. The Lead Agency chose a CEQA baseline year of 2014 with full implementation of the 2008 approved Project for determining the air quality impacts from criteria pollutants¹⁶. The 2014 existing conditions with approved Project mitigation baseline is held constant (i.e. using emission rates from 2014) and compared to future interim years under the Revised Project (i.e. using emission rates from future years)¹⁷. This approach using a comparison between the Revised Project's impacts in future years (using emission rates from those years) and a 2014 baseline (using emission rates from 2014) improperly credits the Revised Project with emission reductions that will occur independent of the Revised Project due to adopted state and federal rules and regulations, since

¹³ *Ibid.* Chapter 3.1, *Air Quality and Meteorology*. Page 3.1-66.

¹⁴ *Ibid.* Executive Summary. Page ES-14.

¹⁵ *Ibid.* Pages 3.1-26, 36, 59, and 63.

¹⁶ *Ibid.* Executive Summary. Page ES-4.

¹⁷ *Ibid.* Chapter 3.1, *Air Quality and Meteorology*. Pages 3.1-42 to 44.

these rules and regulations are expected to improve air quality, even in the absence of the Revised Project. For example, the California Air Resources Board's (CARB) current regulation for trucks and buses will provide significant near-term and long term reductions in NOx emissions from trucks and buses, at 124 tons per day for 2014 and 98 tons per day for 2023¹⁸. The use of the 2014 baseline masks the emission increases from the Revised Project with reductions that have been achieved due to state and federal rules and regulations. As shown in Table 1, the use of the 2014 baseline comparison is misleading because it showcases the Revised Project as an emissions reduction project when mitigation measures have not been implemented since 2008 and are being modified or removed going into the future, if the Revised Project is approved.

Table 1: Copy of Table 3.1-8, Peak Daily Operational Emissions – Revised Project (lbs/day)

Table 3.1-8. Peak Daily Operational Emissions—Revised Project (lbs/day)

Source Category	Peak Day Emissions (lb/day)					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
2023 Revised Project						
Cargo Handling Equipment	43.0	4142.1	108.4	4.0	3.7	1.3
Harbor Craft	2.5	49.6	19.9	0.4	0.4	0.1
Worker Vehicles Offsite	0.4	22.0	1.8	5.3	1.3	0.1
Trucks Offsite Driving	15.9	287.9	509.5	52.4	15.4	3.5
Ocean Going Vessels	193.2	340.3	5622.9	76.3	70.5	165.0
Worker Vehicles Onsite Driving	0.0	1.3	0.1	0.7	0.1	0.0
Trucks Onsite Driving/Idling	4.8	93.3	130.5	30.2	4.8	0.3
Rail Offsite Operations	28.4	220.4	788.6	17.8	16.6	0.9
Rail On Dock Operations	3.6	27.9	96.8	2.1	2.0	0.1
Total	292	5185	7279	189	115	171
2014 Unmitigated Baseline	584	4,729	9,396	213	146	163
Revised Project Minus 2014 Unmitigated Baseline	-292	456	-2118	-24	-31	9
2014 Mitigated Baseline	555	4,731	8,193	193	128	150
Revised Project Minus 2014 Mitigated Baseline	-264	453	-915	-4	-13	22
Significance Threshold	55	550	55	150	55	150
Significant?	No	No	No	No	No	No
2030 Revised Project						
Cargo Handling Equipment	130.3	13831.5	141.1	6.4	5.8	1.4
Harbor Craft	2.7	53.2	21.1	0.5	0.5	0.1

¹⁸ California Air Resources Board. July 14, 2017. Trucks and Bus Regulation: On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation. Accessed at: <https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>, and <https://www.arb.ca.gov/msprog/onrdiesel/documents/truckrulehealth.pdf>.

Harbor Department

Section 3.1 Air Quality and Meteorology

Source Category	Peak Day Emissions (lb/day)					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Worker Vehicles Offsite	0.2	15.8	1.2	5.5	1.4	0.1
Trucks Offsite Driving	19.6	221.3	404.6	56.8	16.6	4.3
Ocean Going Vessels	372.0	716.4	4594.1	114.7	105.9	170.0
Worker Vehicles Onsite Driving	0.0	0.9	0.1	0.7	0.1	0.0
Trucks Onsite Driving/Idling	5.7	62.5	166.8	33.7	5.3	0.4
Rail Offsite Operations	20.1	233.3	581.0	11.8	11.2	0.9
Rail On Dock Operations	2.5	27.7	68.8	1.3	1.3	0.1
Total	553	15163	5979	231	148	177
2014 Unmitigated Baseline	584	4,729	9,396	213	146	163
Revised Project Minus 2014 Unmitigated Baseline	-31	10434	-3417	18	2	14
2014 Mitigated Baseline	555	4,731	8,193	193	128	150
Revised Project Minus 2014 Mitigated Baseline	-2	10431	-2215	38	20	28
Significance Threshold	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No
2036 Revised Project						
Cargo Handling Equipment	101.1	6016.6	135.0	5.8	5.3	1.4
Harbor Craft	3.0	56.4	22.1	0.6	0.5	0.1
Worker Vehicles Offsite	0.2	12.2	0.8	5.2	1.3	0.1
Trucks Offsite Driving	21.2	205.8	350.6	56.8	16.6	4.4
Ocean Going Vessels	372.0	716.4	2991.5	114.7	105.9	170.0
Worker Vehicles Onsite Driving	0.0	0.7	0.0	0.7	0.1	0.0
Trucks Onsite Driving/Idling	5.8	51.4	172.6	33.9	5.4	0.4
Rail Offsite Operations	12.9	221.7	379.1	6.7	6.5	0.9
Rail On Dock Operations	1.8	27.4	48.4	0.8	0.8	0.1
Total	518	7308	4100	225	143	177
2014 Unmitigated Baseline	584	4,729	9,396	213	146	163
Revised Project Minus 2014 Unmitigated Baseline	-66	2580	-5296	12	-3	15
2014 Mitigated Baseline	555	4,731	8,193	193	128	150
Revised Project Minus 2014 Mitigated Baseline	-37	2577	-4093	32	15	28
Significance Threshold	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No
2045 Revised Project						
Cargo Handling Equipment	96.0	8915.9	132.8	5.6	5.2	1.4
Harbor Craft	2.5	50.0	20.0	0.5	0.4	0.1
Worker Vehicles Offsite	0.1	11.2	0.8	5.3	1.3	0.1
Trucks Offsite Driving	26.6	254.6	421.7	56.9	16.7	4.4
Ocean Going Vessels	372.0	716.4	1288.0	114.7	105.9	170.0
Worker Vehicles Onsite Driving	0.0	0.6	0.0	0.8	0.1	0.0

Source Category	Peak Day Emissions (lb/day)					
	VOC	CO	NO _x	PM ₁₀	PM _{2.5}	SO _x
Trucks Onsite Driving/Idling	5.8	47.9	174.0	33.9	5.4	0.4
Rail Offsite Operations	7.8	206.0	209.4	3.1	3.1	0.8
Rail On Dock Operations	1.2	27.4	30.8	0.4	0.4	0.1
Total	512	10230	2278	221	139	177
2014 Unmitigated Baseline	584	4,729	9,396	213	146	163
Revised Project Minus 2014 Unmitigated Baseline	-72	5501	-7119	8	-7	14
2014 Mitigated Baseline	555	4,731	8,193	193	128	150
Revised Project Minus 2014 Mitigated Baseline	-43	5499	-5916	28	11	28
Significance Threshold	55	550	55	150	55	150
Significant?	No	Yes	No	No	No	No

Note:

Increments between the Revised Project and the 2014 Unmitigated Baseline are shown for informational purposes only.

Rail Offsite Operations considered for the peak day include emissions occurring only within SCAB boundaries

OGV emissions for peak day include operations up to SCAB Overwater Boundary

CHE: LPG yard tractor emission factors for CO from Port of Los Angeles 2014 Emission Inventory; these emission factors are of lower certainty in future years where forecasts of CO emission rates from LPG yard tractors are not available.

In *Neighbors for Smart Rail v. Exposition Metro Line Construction (2013) 57 Cal.4th 439*, the California Supreme Court held that using a future baseline is proper in some cases. The purpose of CEQA is to disclose environmental impacts from the Revised Project to the public and decision makers in order to provide the public and decision makers with the actual changes to the environment from the activities involved in the Revised Project. By taking credit for future emission reductions from existing air quality rules and regulations, the Revised Project's air quality impacts are likely underestimated. Therefore, SCAQMD staff believes that the Lead Agency may have substantially underestimated the true impacts attributable to the Revised Project's activities for VOCs, NO_x, PM₁₀, PM_{2.5}, and SO_x emissions. SCAQMD staff recommends that the Lead Agency revise the air quality analysis to include a comparison between the emissions in year 2023, year 2030, year 2036, and year 2045 with the Revised Project and the emissions in the same respective years without the Revised Project, and use this analysis to determine the level of significance (i.e. air quality impacts based on the change in activity due to the Revised Project).

Methodology Used for the Air Quality Impacts and the Health Risk Assessment

- As described in Comment No. 1, SCAQMD staff found that the Revised Project's operational air quality emissions from criteria pollutants were first subtracted from the 2014 mitigated or unmitigated CEQA baseline air emissions, and the resulting differences were compared to the SCAQMD's regional air quality CEQA significance thresholds to determine the level of significance in year 2023, year 2030, year 2036 and year 2045¹⁹. However, based on a review of the HRA²⁰, SCAQMD staff found that the methodology for the HRA analysis included a comparison to the 2014 mitigated CEQA baseline and a comparison to the floating future

¹⁹ *Ibid.*

²⁰ *Ibid.* Pages 3.1-59 to 60.

mitigated baseline^{21,22}. The comparison to the floating future mitigated baseline was used to determine the level of significance²³. As such, SCAQMD staff found that the methodology for determining the significance of air quality impacts from criteria pollutants is not consistent with the methodology for determining the significance of health risks. It is recommended that the Lead Agency use consistent methodologies when determining both air quality and health risk impacts in the Final SEIR or provide clarification on the use of different methodologies.

Analysis of the Revised Project's Consistency with the Air Quality Management Plan

3. The air quality analysis in the DSEIR did not analyze whether the Revised Project is consistent with the Air Quality Management Plan (AQMP). Since this DSEIR is only being prepared because of the project's inability to meet previous commitments, and the air quality impacts, based on SCAQMD staff's calculations, will be significant as described above in Comment Nos. 1 and 2, this question should not be dismissed in the air quality analysis. The AQMP relies on commitments made by the port and others to ensure that emission reductions occur on time to meet federal and state standards. Because of the precedent the Revised Project is setting by failing to meet previous commitments, the consistency of this Project with the AQMP should be fully analyzed

Feasibility of the Mitigation Measure (MM) AQ-20

4. The Lead Agency excluded six of the mitigation measures that were approved in 2008 in the Revised Project, and one of these removed mitigation measures was MM AQ-20, which required the phase in of LNG-fueled heavy-duty trucks serving the Project by 50 percent in 2012 and 2013, 70 percent in 2014 through 2017, and 100 percent in 2018²⁴. The Lead Agency stated that the MM AQ-20 was "not included in the Revised Project because there is no feasible measure for reducing drayage truck emissions by quantifiable amounts"²⁵.

SCAQMD staff disagrees with the Lead Agency's feasibility assessment. CEQA defines feasible to mean "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors" (California Public Resources Code Section 21061.1 and CEQA Guidelines Section 15364). The Lead Agency has already established the feasibility for phasing in LNG-fueled heavy-duty trucks over time in the DSEIR and the draft 2017 CAAP Update. In the DSEIR, the Lead Agency showed that in 2014, six percent of truck calls operated by West Basin Container Terminal, including the Revised Project, were made by LNG-fueled trucks, and a Port-wide average was 10 percent²⁶. While China Shipping points to the technological limitations of LNG-fueled trucks²⁷, the number of LNG-fueled trucks that are already operating at the ports, including the CS Container Terminal, establishes the technological feasibility for implementing MM AQ-20 over time. The Port's own 2015 Draft Zero Emission White Paper Appendix 2 identified programs and responsible agencies for funding zero and near-zero trucks and equipment. This establishes the economic feasibility. In the recent draft 2017 CAAP

²¹ *Ibid.*

²² *Ibid.* Page 3.1-26. "The floating future baseline uses 2014 activity levels, but uses emission factors averaged over a 30-year exposure period, that incorporate the effects of existing air quality regulations."

²³ *Ibid.* Page 3.1-36.

²⁴ *Ibid.* Page ES-9.

²⁵ *Ibid.*

²⁶ *Ibid.* Chapter 2, *Project Description*. Page 2-4.

²⁷ *Ibid.* Chapter 1, *Introduction*. Page 1-10.

Update, the San Pedro Ports renewed their commitment “to assist in transitioning the current drayage truck fleet to a near-zero and ultimately zero-emissions drayage trucking fleet by 2035”²⁸. This renewed commitment establishes the social feasibility and willingness to implement zero or near-zero technologies at the ports. Therefore, SCAQMD staff recommends that the Lead Agency require the implementation of zero or near-zero emission heavy-duty trucks at the Terminal with a new timeline and implementation mechanism that are consistent with the draft 2017 CAAP Update and require the Terminal operator to fund the implementation.

5. Further, SCAQMD staff found that there was no analysis in the DSEIR to support the Lead Agency’s statement – “there is no feasible measure for reducing drayage truck emissions by quantifiable amounts”²⁹. The feasibility analysis on MM AQ-20 in the DSEIR was related to the technological, practical, and operational feasibility, which did not speak to the feasibility of methodologies or modeling for calculating emission reductions from LNG-fueled trucks. Therefore, SCAQMD staff recommends that the Lead Agency provide additional information to support the feasibility analysis related to emission calculations in the Final SEIR.
6. The Revised Project is an important and significant project for the Port and the region. SCAQMD staff recommends that the Port set emissions reduction targets for this Terminal that are consistent with the air quality attainment goals of the 2016 AQMP. The Terminal-based emission reduction targets should use more recent Port’s growth projections, 2016 AQMP emission inventories, and updated technology assessments to improve quantification efforts to help determine the Terminal’s fair share of emissions reductions. The emission reduction targets will also help monitor the progress of emission reductions at the Terminal level, 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 for zero or near-zero emission heavy-duty trucks.

Mitigation Measures

Performance Standards-Based Technology Review

7. Consistent with the 2017 CAAP Update goals, the Lead Agency should take this opportunity to deploy the lowest emission technologies possible. This is consistent with Port’s technology advancement commitment to cleaner air, as well as in support of the SCAQMD’s commitment to achieve NOx emission reductions. The deployment should include those technologies that are “capable of being accomplished in a successful manner within a reasonable period of time” (California Public Resources Code Section 21061.1), such as zero and near-zero emission technologies that are expected to be available in the life of the Revised Project. Additionally, CEQA requires feasible mitigation measures for effects that are found to be significant. Here, since the Lead Agency found that the air quality and health impacts for the Revised Project would be significant, the Lead Agency should consider and discuss measures to mitigate the significant impacts in the Final SEIR. Formulation of mitigation measures should not be deferred until some future time. However, measures may specify performance standards which

²⁸ San Pedro Bay Ports. July 2017. *Clean Air Action Plan 2017 Update Draft*. Page 29.

²⁹ *Ibid.*

would mitigate the significant effect of the project and which may be accomplished in more than one specified way (CEQA Guidelines Section 15126.4). As such, SCAQMD staff recommends that the Lead Agency assess equipment availability, equipment fleet mixtures, and best available emissions control devices every two years beginning two years after the Revised Project is approved, and specify performance standards for the technology assessment. The 2017 CAAP Update Draft such as the TAP and the CTP establishes the economic, environmental, social, legal, and technological feasibility for implementing a performance standards-based technology assessment for the Revised Project.

Other Enforceable Mitigation Measures

8. As described in Comment No. 1 above, the Revised Project's emissions from VOCs, NO_x, PM₁₀, PM_{2.5}, and SO_x would exceed SCAQMD's air quality CEQA significance thresholds, resulting in significant and unavoidable air quality impacts, had the Lead Agency used a proper CEQA baseline to calculate emissions for years 2023, 2030, 2036 and 2045. CEQA requires that the Lead Agency considers mitigation measures to minimize significant adverse impacts pursuant to CEQA Guidelines Section 15126.4 and that all feasible mitigation measures that go beyond what is required by law be utilized. To reduce the significant adverse air quality impacts from the Revised Project, SCAQMD staff recommends that the Lead Agency develop new or additional mitigation measures for the Revised Project to:

- (1) Require all newly registered trucks at the Terminal to meet the CARB Optional Low NO_x Standard of 0.02 g/bhp-hr (0.02NZ).
- (2) Develop a truck fee or rate structure for the Terminal with preferential access through a lease measure for zero- or near-zero emission trucks. The structure should be tied with the CARB's truck engine rule in 2019 and is also consistent with the timelines and goals of the 2016 AQMP and 2017 CAAP Update strategies.
- (3) Develop a target-focused and performance-based timeline and structure to turn over to zero emission vehicles and trucks between 2020 and 2035.
- (4) Implement zero emission truck commercialization and demonstration programs or projects at the Terminal.
- (5) Offer funding to incentivize zero- or near-zero emission drayage trucks at the Terminal to enter the Port Drayage Registry Program before year 2023.
- (6) Develop specific timelines for transitioning to zero emission cargo handling equipment (CHE). For example, SCAQMD staff recommends that the Port develop a step-down program to require any off-road equipment to be zero-emissions first, then followed by near-zero emission, then Tier 4 alternative fuels, and then Tier 4 engine as a floor. The criteria for a step-down program can be based on availability of equipment at the time of purchase and cost of equipment compared to the Tier 4 floor after considering available incentive funds.
- (7) Develop interim milestones with a minimum amount of CHE replacement each year to ensure that the Port is making adequate progress towards the target of replacing all equipment by 2023. The interim milestones should support the recommended timelines as described No. (6).
- (8) Offer incentive to encourage the use of on-dock rail to serve this Terminal with a similar step-down program as described in No. (6). For example, the Port should

- provide the highest incentives for electric locomotives and then locomotives that meet Tier 5 emission standards with a floor on the incentives for locomotives that meet Tier 4 emission standards.
- (9) Develop a purchasing policy to require that all new equipment and vehicles after 2022 be zero emission.
 - (10) Develop timelines for setting and assessing performance and emission reduction targets, implementation schedules for each new mitigation measure, and the process for evaluating the effectiveness of any proposed mitigation measure.

Air Dispersion Modeling Parameters

9. The Lead Agency used differing Locomotives – Day and Night release heights in their source parameters (Day – 5.6 meters and Night – 14.6 meters). Based on a review of Table B2-1: AERMOD Source Parameter³⁰, SCAQMD staff found that locomotives were set to different heights for daytime conditions compared to nighttime conditions. Changes in atmospheric conditions are already accounted for within AERMOD. By using higher nighttime release heights, the Lead Agency has likely underestimated health risks. The Lead Agency should revise the HRA to use the same release heights for daytime and nighttime locomotive emissions and re-evaluate the health risks.

Based on a review of the CARB’s 2004 Roseville Study³¹, SCAQMD staff found that the nighttime release height for the Revised Project was based on the recommendations in the ISCST3 User’s Guide. “AERMOD’s formulation is significantly more advanced than that of ISCST3, includes a mechanical component, and in using hourly input data, provides a more realistic sequence of the diurnal mixing height changes”³². As such, SCAQMD staff recommends that the Lead Agency revise air dispersion modeling to use the same release heights for daytime and nighttime and re-evaluate the air quality and health risk impacts.

Meteorological Data

10. Section 3.1.2 Meteorological Data of the DSEIR indicated that 2006-2007 meteorological data from the Wilmington Community Station – Saints Peter and Paul School (SPPS) was used for dispersion modeling for both criteria pollutants and TACs³³. The U.S. EPA recommends five years of meteorological data, or at least one year of site-specific data for the purposes of air dispersion modeling. Consecutive years from the most recent, readily available five-year period are preferred³⁴. Additionally, the meteorological data was processed in 2013 using the U.S. EPA approved AERMET (version 12345)³⁵. However, since AERMET (version 12345), there has been four AERMET versions released³⁶. AERMET version 16216 is the most recent

³⁰ *Ibid.* Appendix B2, *Criteria Pollutant Modeling*. June 2017. Table B2-1.

³¹ California Air Resources Board. October 2014. *Roseville Rail Yard Study*. Accessed at: <https://www.arb.ca.gov/diesel/documents/rstudy/rstudy101404.pdf>.

³² U.S. Environmental Protection Agency. June 2003. *Comparison of Regulatory Design Concentrations: AERMOD VERSUS ISCST3 AND CTDMPLUS*. Page 40. Accessed at: <https://www3.epa.gov/scram001/7thconf/aermod/compar.pdf>.

³³ DSEIR. Appendix B2, *Criteria Pollutant Modeling*. June 2017. Page B2-9

³⁴ United States Environmental Protection Agency. February 2000. *Meteorological Monitoring Guidance for Regulatory Modeling Applications*. Page 6-30. Accessed at: <https://www3.epa.gov/scram001/guidance/met/mmgrma.pdf>. See also 40 CFR Ch. I (7-1-11 Edition). *Appendix W to Part 51 – Guideline on Air Quality Models*. Available at: <https://www.gpo.gov/fdsys/pkg/CFR-2011-title40-vol2/pdf/CFR-2011-title40-vol2-part51-appW.pdf>.

³⁵ DSEIR. Appendix B2, *Criteria Pollutant Modeling*. June 2017. Page B2-9

³⁶ U.S. EPA. *Meteorological Processors and Accessory Programs*. Accessed at: <https://www.epa.gov/scram/meteorological-processors-and-accessory-programs>.

version. Therefore, SCAQMD staff recommends that the Lead Agency update the meteorological data with the latest five years of available data and use AERMET version 16216 (or the most recent version available at the time of analysis) to process the data consistent with the U.S. EPA's recommendation. Updates and improvements to AERMET may also affect the air dispersion modeling results. Alternatively, SCAQMD staff has prepared AERMOD-ready meteorological data which could be used by the Lead Agency in its air quality analysis. The meteorological data is available for download at the SCAQMD's website.³⁷

Methodology for Determining Morbidity and Mortality Impacts

11. Mortality is a measure of the number of deaths in a population, scaled to the size of that population, per unit time. Morbidity refers to the number of individuals who have contracted a disease during a given time period (the incidence rate) or the number who currently have that disease (the prevalence rate), scaled to the size of the population. The Lead Agency stated that it had “developed a methodology for assessing mortality and morbidity in CEQA documents based on the health effects associated with changes in PM_{2.5} concentrations,”³⁸ and it “[...] generally follows the approach used by CARB to estimate statewide health impacts from ports and goods movement in California (CARB, 2006b).”³⁹ Based on the morbidity and mortality analysis, the Lead Agency used SCAQMD's PM_{2.5} localized significance criterion of 2.5 µg/m³ and did not conduct a morbidity and mortality analysis claiming the Revised Project would not exceed SCAQMD's PM_{2.5} localized significance criterion⁴⁰.

First, SCAQMD staff does not agree with using SCAQMD's localized PM_{2.5} threshold as a screening threshold for determining the significance of morbidity and mortality impacts. The SCAQMD's PM_{2.5} significance threshold of 2.5 µg/m³ is designed to determine the significance of localized impacts on nearby receptors, and it was made to be consistent with existing permitting requirements under SCAQMD Rule 1303. The PM_{2.5} significance threshold of 2.5 µg/m³ was not intended to be used as a screening tool to determine if mortality and morbidity impacts analysis would be warranted. As such, SCAQMD staff recommends that the Lead Agency revise the PM mortality analysis and use the methods described in California Air Resources Board's 2010 guidance document⁴¹. Second, the analysis did not include a reference to the LAHD's methodology that was used for assessing mortality and morbidity attributable to PM. As such, SCAQMD staff recommends providing a reference to the LAHD's methodology in the Final SEIR.

Other Comments

12. Based on a review of Table 2-1 in Section 2, *Project Description*, SCAQMD staff found that MM AQ-9 (Alternative Maritime Power (AMP)) had achieved 98% compliance with vessels

³⁷South Coast Air Quality Management District. Meteorological Data for AERMOD. Accessed at: <http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod>.

³⁸DSEIR. Chapter 3.1. Pages 3.1-26, 31, and 35.

³⁹*Ibid.* Page 3.1-35.

⁴⁰*Ibid.* Page 3.1-65.

⁴¹California Air Resources Board. August 31, 2010. *Estimate Premature Deaths Associated with Long-term Exposure to Fine Particle Pollution (PM_{2.5}) in California Using a U.S. Environmental Protection Agency Methodology*. Accessed at: https://www.arb.ca.gov/research/health/pm-mort/pm-report_2010.pdf.

using AMP in 2014⁴². However, the narration in other parts of the DSEIR stated that 80% maximum AMP compliance was achieved for that same year⁴³. It is recommended that the Lead agency correct the inconsistency in the Final SEIR.

13. Table 3.1-8: Peak Daily Operational Emissions – Revised Project (lbs/day) of Section 3.1, *Air Quality and Meteorology* showed that the Revised Project’s operational CO emissions for year 2023 did not exceed SCAQMD’s air quality CEQA significance threshold. However, the Lead Agency found that “the Revised Project will have a significant and unavoidable impact related to criteria pollutants because emissions of Carbon Monoxide (CO) would exceed significance criteria for all four analysis years [2023, 2030, 2036, and 2045] even after mitigation.⁴⁴” Therefore, SCAQMD staff recommends that the Lead agency correct the inconsistency in the Final SEIR.

⁴² DSEIR. Chapter 2, Project Description. Page 2-3. Table 2-1: *Summary of 2008 EIS/EIR mitigation and lease measures for the CS Container Terminal being re-evaluated in this SEIR.*

⁴³ *Ibid.* Page 2-10 and 2-12.

⁴⁴ *Ibid.* Chapter 1, *Introduction*. Page 1-28.

Exhibit B



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SENT VIA E-MAIL & USPS:

November 30, 2018

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**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 letter¹, 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.

The Recirculated DSEIR acknowledges the Project results in significant regional air quality impacts²; exceeds localized ambient air pollutant concentrations³; 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: NO₂- 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.

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.

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.

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 NO_x 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).)

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 NO_x 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

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 CAAP⁵. 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.

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, 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 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 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 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 Report⁶, using a conversion rate of 6.95 Chinese yuan to 1 US dollar⁷. 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>

example, Cosco's most recent annual report shows that it made a profit of 2,661,936 RMB (~\$382 million) in 2017⁸ and also recorded annual profits since at least 2013⁹.

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

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

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

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>

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

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

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.

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)

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

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

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.

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

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

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

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 place¹¹. 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

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.

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*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.

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 article¹² 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>

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

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 million¹³, whereas the FEIR Mitigated Scenario would have resulted in an incremental cancer risk below CEQA significance thresholds¹⁴. 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

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.

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 Guide¹⁵, 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

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

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

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 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.

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 to 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 to 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.

Exhibit C



South Coast Air Quality Management District

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SENT VIA E-MAIL AND USPS:

October 4, 2019

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City of Los Angeles Harbor Department

Board of Harbor Commissioners

425 S. Palos Verdes Street

San Pedro, California 90731

RE: Final Supplemental Environmental Impact Report (SEIR) for Berths 97-109 [China Shipping] Container Terminal Project (SCH No.: 2003061153)

Dear Board of Harbor Commissioners,

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to provide additional comments on the Final SEIR for the Berths 97-109 [China Shipping] Container Terminal project (project). South Coast AQMD staff previously submitted comments on the Draft SEIR¹ and the Recirculated Draft SEIR² put forward by the City of Los Angeles Harbor Department (LAHD).

South Coast AQMD staff has a long history of commenting on the project and has consistently expressed concerns in previous letters regarding the project's significant air quality impacts and the need for mitigation measures to reduce these impacts. In 2004, the project was allowed to proceed with construction because of an agreement to improve air quality and quality of life³. After an extensive public process, the LAHD put forward an EIR. Based on the 2008 EIR, the project would exceed the South Coast AQMD's CEQA air quality regional significance threshold for NOX by up to 135 times and the ambient air quality standard for NO2 by six times⁴. These exceedances would impact residents, school children, and other sensitive populations. Exposures to NO2 are associated with chronic respiratory diseases such as asthma as well as declines in pulmonary function, especially in children. Therefore, the LAHD included 52 mitigation measures, including 30 air quality measures in the 2008 EIR to reduce those impacts. The Board of Harbor Commissioners (Board) adopted the mitigation measures when the project was approved. Eleven years later, the LAHD is proposing to increase the throughput and remove or modify 10 of 52 mitigation measures, including six of which were directly targeted towards reducing air quality impacts. Based on the Final SEIR, the project will exceed the significance threshold for NOX by up to 159 times⁵. Additionally, in 2014, the project required

¹ South Coast AQMD. September 29, 2017. Accessed at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2017/dseir-chinashipping-092917.pdf>.

² South Coast AQMD. November 30, 2018. Accessed at: <http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2018/LAC181002-11.pdf>.

³ Port of Los Angeles. May 2003. *Agreement Reached to Open China Shipping Terminal*. Accessed at: https://www.portoflosangeles.org/press/rel_china_shipping_settlement.pdf.

⁴ Recirculated Draft EIR. 2008. Page 3.3-88.

⁵ Draft Recirculated SEIR. 2018. Page 3.1-4.

550,000 truck trips, 418 trains, and 163 vessel calls⁶. Since the project's throughput will increase by 56% in 2045⁷, there will be more trucks and higher NOx emissions. Therefore, South Coast AQMD staff is concerned that despite the project's significant air quality impacts, the LAHD is allowing the project to increase its throughput while at the same time reverse previous commitments to mitigation, including zero and near-zero emission trucks and equipment, through CEQA at the project.

The decision to approve the project was the culmination of the Board's continuous commitment to balancing economic growth and job creation with community's needs for cleaner and healthier air – "a win-win for the Los Angeles economy and its environment."⁸ However, the tenant, China Shipping, refused to sign an amended lease to incorporate the Board-adopted mitigation measures, and has been allowed to continue operation without penalties for non-compliance with the 2008 EIR. South Coast AQMD staff urges the Board to hold the tenant accountable for the air quality commitments or for the LAHD to make up the shortfall.

The Final SEIR removes key mitigation measures that are needed to reduce the project's significant adverse air quality and health risk impacts for which the LAHD committed to in the 2008 EIR without providing adequate substitute measures or additional mitigation measures to reduce the more severe air quality impacts. South Coast AQMD staff is concerned about the increased air quality impacts and associated public health impacts and believes that the project should not be allowed to move forward for the following reasons. Please see Attachment A-1 for more information.

- The Final SEIR weakens the LAHD's commitment to mitigation and zero-emission technology implementation, and ultimately the protection of the environment. It sets a precedent for using CEQA to allow harm to the environment. An EIR is intended to serve not only to protect the environment but also to demonstrate to the public that it is being protected (CEQA Guidelines Section 15003(b)). CEQA was intended to be interpreted in such a manner as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language (CEQA Guidelines Section 15003(f)).
- The Final SEIR does not bind the tenant to the mitigation measures and lease measures. Under CEQA, a mitigation measure must be required in, or incorporated into, the project (CEQA Guidelines Section 15091(a) and (d)). Mitigation measures must also be fully enforceable through permit conditions, agreements, or other measures (CEQA Guidelines Section 15126.4(a)(2)). The Board should have conditioned any project approval on compliance with the adopted mitigation measures. Instead, the LAHD has acknowledged that many of the 2008 EIR mitigation measures were not implemented or enforceable because the tenant did not agree to amend Permit No. 999 to incorporate the Board-adopted mitigation measures. (See Response to Comment SCAQMD-17). (See also

⁶ *Ibid.* Page 3.3-18.

⁷ Based on the Final SEIR, the project will increase the cargo throughput by 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.

⁸ Port of Los Angeles. May 2003. *Agreement Reached to Open China Shipping Terminal*. Accessed at: https://www.portoflosangeles.org/press/rel_china_shipping_settlement.pdf.

Response to Comment NRDC-28). “The only way to obligate the tenant to implement the measures is through provisions of a lease amendment.” (See Response to Comment SCAQMD-9). When the Board considers certification of the Final SEIR on October 8, 2019, the public does not know and there is no assurance that the tenant will enter into a binding and enforceable agreement with LAHD to implement the Final SEIR, nor whether the LAHD has the authority to render the identified mitigation measures enforceable. This is an important reason for not allowing the Final SEIR to move forward because the LAHD is going to rely on the tenant to meet its legal obligation to mitigate significant air quality impacts under CEQA after the Final SEIR is certified. (See Response to Comment SCAQMD-9). Therefore, the mitigation measures violate CEQA’s requirement for enforceability.

- In Response to Comment SCAQMD-9, the LAHD stated that the only way to obligate the tenant to implement the mitigation measures is through provisions of a lease amendment, and that the lease amendment process is a separate action, requiring the Board’s approval, subject to a negotiation process and LAHD’s leasing policy. (See also Response to Comment CFASE-9). “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.” [See Supplemental Mitigation Monitoring and Reporting Program (MMRP) Overview]. (See also Response to Comment SCAQMD-2). Since the lease amendment process is the only legal mechanism for the LAHD to enforce the Board-adopted mitigation measures and the Supplemental MMRP, the lease amendment should be part of the project for the Board to consider at the same time as certification of the Final SEIR. By including the lease amendment as part of the project approval, the public is assured that the mitigation measures are enforceable and will be implemented.
- In Master Response 5 and Response to Comment CFASE-9, the LAHD responded that “currently, LAHD’s leasing policy does not contain any provisions for penalties or fees associated with non-compliance with mitigation measures or environmental requirements.” If the tenant does not agree to amend the lease to incorporate the mitigation measures, the LAHD does not have other mechanisms to obligate the tenant to agree to lease amendments. When the tenant does not implement the Board-adopted mitigation measures, the LAHD should implement them since the LAHD is the named responsible party in the Supplemental MMRP. One mechanism for the LAHD to implement the mitigation measures could be through a mitigation fee program to incentivize and accelerate turnover of trucks and cargo handling equipment to be zero emissions and make that program available to all tenants at the Port of Los Angeles (Port), including China Shipping. The mitigation fee program would be separate from and in addition to the greenhouse gas (GHG) credit fund (lease measure GHG-1) since the GHG credit fund is to fund GHG-reducing projects and programs or the purchase of GHG emission reduction credits, while the mitigation fee program would focus on criteria pollutants such as NOX, PM10, and PM2.5. One way to calculate the amount of mitigation fee would be to use the project’s emissions in pounds per day multiplied by the dollar amount per pound from the Carl Moyer Program, which provides a range from

\$30,000 to \$100,000 per ton of NOX emissions⁹. For example, the project's maximum peak daily NOX emissions of 4,920 pounds per day in 2023¹⁰, which is equivalent to 898 tons/year, is multiplied by \$30,000 and \$100,000. This results in a range of \$26.9 million to \$89.8 million in mitigation fees, which could be reinvested into incentivizing zero-emission truck and equipment technologies for the China Shipping terminal to reduce emissions.

- The LAHD's failure to implement all the mitigation measures committed to in the 2008 EIR allowed the project to emit an additional 772 lbs/day of NOX in 2012, 1,203 lbs/day of NOX in 2014, and 1,360 lbs/day of NOX in 2018¹¹. These foregone emission reductions will continue to increase into the future for the next 20 years, should the Final SEIR be allowed to move forward. The 2016 Air Quality Management Plan (AQMP) identified marine ports for emission reductions, and South Coast AQMD has been working diligently with LAHD staff to identify and render enforceable the CAAP emission reduction measures. This project is a step back and delays the LAHD's overall abilities towards achieving the 2017 Clean Air Action Plan and potentially impede the South Coast AQMD's ability to attain state and federal air quality standards.
- The project will result in a maximum individual cancer risk of 25.4 in a million, which is 2.5 times greater than the South Coast AQMD's CEQA significance threshold of 10 in a million¹². Additionally, the South Coast AQMD's Multiple Air Toxics Exposure Study (MATES IV), completed in May 2015, concluded that the largest contributor to cancer risk from air pollution is diesel particulate matter emissions, and that the areas around the Port of Los Angeles and the Port of Long Beach is significantly impacted with some of the highest risks from air pollution in the region with a maximum simulated cancer risk of 1,057 in a million¹³. When the health impacts from the project are added to those existing impacts, the community will face an even greater exposure to air pollution and bear a disproportionate burden of increasing health risks. Therefore, mitigation measures are needed to reduce the significant health risk impacts on the community.
- The project is located in an area heavily impacted by air pollution and poses important environmental justice issues. The Wilmington, Carson, West Long Beach community was identified as an AB 617 community, which requires the South Coast AQMD to work with community and other stakeholders to identify and address community concerns in disadvantaged communities suffering from disproportionate air pollution impacts generated from sources, such as marine ports, heavy-duty diesel trucks, oil drilling and production facilities. Through the AB 617 program, the community and South Coast

⁹ South Coast AQMD. Carl Moyer Program Guidelines. Appendix C, *Calculation Methodology*. Page C-2. Accessed at: https://ww3.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_c.pdf.

¹⁰ Final SEIR. 2019. Chapter 3, *Modifications to the Recirculated DSEIR*. Page 3-16.

¹¹ Recirculated Draft EIR. 2018. Pages 3.1-60 and 61.

¹² Recirculated Draft SEIR. 2018. Page 3.1-69.

¹³ South Coast AQMD. May 2015. *Multiple Air Toxics Exposure Study in the South Coast Air Basin*. Accessed at: <http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf>.

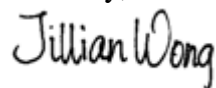
AQMD staff have developed a Community Emissions Reduction Plan (CERP)¹⁴ that identifies air quality priorities and actions to reduce air pollution in the community. A decision to move forward on the Final SEIR without a strong commitment to zero-emission trucks and cargo handling equipment will hinder the CERP implementation, and the community will face an even greater exposure to air pollution and bear a disproportionate burden of increasing health risks.

The project's emissions exceeded the CEQA significance thresholds for NO_x, CO, VOC, PM₁₀, and PM_{2.5} in the 2008 EIR. This project is proposing an increase in cargo throughput, which will result in greater emissions in the future. Instead of adding to or strengthening the existing mitigation measures, the LAHD is allowing the project to remove and weaken the mitigation measures committed to in the 2008 EIR. Therefore, the LAHD must do more to mitigate the air quality and health risks impacts from the project. Specifically, the LAHD should keep to the mitigation measure commitments made in the 2008 EIR, including zero and near-zero emission trucks and cargo handling equipment, and adopt a new phase-in schedule to pursue integration of zero-emission technologies into Port-related goods movement to be consistent with the CAAP emission reduction measures. Please see Attachment B-1 for a list of companies and resources that the LAHD should contact to accelerate implementation of zero emission technologies for the China Shipping terminal.

In conclusion, the Final SEIR is inadequate in reducing emissions and does not meet the requirements of CEQA because the mitigation measures are insufficient, and in any event, are not included in enforceable requirements applicable to the tenant, China Shipping. South Coast AQMD staff recommend that you delay approval of this project and consider additional measures, including those suggested in our previous comment letters, to mitigate the significant air quality and health risk impacts.

We appreciate your consideration of these comments and look forward to continuing to work together to reduce air pollution. Please feel free to call me at (909) 396-3176 if you have questions or wish to discuss our comments.

Sincerely,



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

cc: Mr. Eugene D. Seroka, the City of Los Angeles Harbor Department
Mr. Christopher Cannon, the City of Los Angeles Harbor Department

¹⁴The Wilmington, Carson, West Long Beach Community Emissions Reduction Plan is available at: <http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2019/2019-sep6-025c.pdf>.

ATTACHMENT A-1
Additional South Coast AQMD Staff's Comments on the Final SEIR for
Berths 97-109 [China Shipping] Container Terminal Project

The following includes South Coast AQMD staff's specific comments on the Final SEIR for the Berths 97-109 [China Shipping] Container Terminal Project.

The Responses to Comments Were Incomplete and Non-Responsive

Re: Responses on Economic Infeasibility Based on Equipment Remaining Useful Life

Responses to Comments SCAQMD-15, 16, 18, 19, 20, and 21 on the equipment's remaining useful life were inconclusive and non-responsive. The LAHD stated that replacing equipment with significant remaining useful life will be expensive and economically infeasible. The Recirculated Draft SEIR stated that the 2017 equipment list was used as the basis for developing future year 2018-2045 cargo handling equipment (CHE) emissions¹⁵. However, this list was not included in the 2017 Draft SEIR, the 2018 Recirculated Draft SEIR, or the Final SEIR for South Coast AQMD staff or the public to determine how many years of remaining useful life, in terms of actual numbers of years, a range of years, or an averaged number of years, are left on the equipment. The California Air Resources Board (CARB) stated in 2014 that the equipment useful life is seven years for yard trucks, 11 to 12 years for container handling equipment, and 20 years for bulk handling equipment and forklifts¹⁶. From this, some CHE may have shorter useful lives that may be economically feasible to turn over well before 2045. However, without the 2017 equipment list showing how many years of useful life each equipment has, the LAHD did not include substantial evidence to support the claim of economic infeasibility based on equipment useful life.

Re: Responses on the Consistency Analysis with the 2016 AQMP

In the November 30, 2018 comment letter, South Coast AQMD staff recommended the consistency of the project with the AQMP be fully analyzed in the air quality section since the project is a setback compared to the previous air quality commitments (See Comment SCAQMD-28). The LAHD's response to South Coast AQMD staff's comment is that the forecasted throughput of this project is included in the Port-wide growth projections provided to South California Association of Government (SCAG) for development of the AQMP, and that the project complies with the South Coast AQMD mobile source rules to ensure no obstruction of the AQMP implementation. Therefore, the project would be considered consistent with the AQMP and not interfere with attainment goals. In the response to South Coast AQMD staff's comment-28, the LAHD also noted that the AQMP is not based upon mitigation commitments from specific projects analyzed under CEQA. Therefore, the LAHD found the consistency analysis with the 2016 AQMP in the Recirculated Draft SEIR was adequate.

¹⁵ Recirculated Draft SEIR. 2018. Page 3.1-32.

¹⁶CARB. September 9, 2014. *Cargo Handling Equipment Technology Assessment*. Accessed at: <https://ww3.arb.ca.gov/msprog/tech/presentation/cargohandling.pdf>.

The consistency analysis in the Recirculated Draft SEIR was inadequate. The LAHD discussed the project's cargo forecasts for development of the AQMP, listed the AQMPs, listed mobile sources control measures related to marine ports in the 2016 AQMP, and listed emission reduction measures in the 2017 CAAP Update¹⁷. Based on this list, the LAHD concluded that the project is consistent with the CAAP and the 2016 AQMP. A mere list of air quality plans and emission control measures is not an analysis. The CAAP and the 2016 AQMP are region- and area-wide air quality plans for a large geographic area in which the project is located. While including the project's cargo forecasts in the Port-wide emission projections for inclusion in the 2016 AQMP is one mechanism to ensure that the project will not conflict with or obstruct implementation of the 2016 AQMP, the LAHD did not identify and analyze which emission control measures in the CAAP or the 2016 AQMP the tenant will be responsible for implementing in order to contribute the project's fair share of emission reductions to meet the emission reduction goals and policies in the plan. Therefore, the consistency analysis in the Recirculated Draft SEIR was conclusory and lacks substantial evidence.

The consistency analysis should be both quantitative and qualitative. The quantitative consistency analysis should take into account the fact that the project will result in significant and unavoidable air quality impacts from CO, NO_x, and VOC and that the project's ambient concentrations would also be significant and unavoidable for federal and state NO₂ emissions and 24-hour and annual PM₁₀ emissions¹⁸. Further information is needed to substantiate how a project whose emissions alone cause violations of a national ambient air quality standard can be consistent with the South Coast AQMD air quality plan. The qualitative consistency analysis should focus on the 2016 AQMP health-protecting goals and policy direction, trend, and trajectory to determine if the project is in line and stays in step with them. As such, the consistency analysis in the Recirculated Draft SEIR, using cargo growth forecasts and a list of emission control measures as the bases to support that the project is consistent with the 2016 AQMP, was not adequate.

Responses to Comments SCAQMD-4, 7 and 28 merely repeat the consistency analysis in the Recirculated Draft SEIR and are therefore conclusory and non-responsive.

It is important to recognize that the 2016 AQMP provides a Basin-wide, regional perspective on air quality and the challenges facing the Basin. While the 2016 AQMP is not required to and does not include a compilation of all of the projects evaluated under the CEQA or include a list of adopted project-level mitigation measures, it includes policies, requirements, and control strategies for emissions that are needed for the South Coast AQMD to meet federal standards to bring the Basin into attainment in a timely manner, as well as goals for reducing air toxics. Thus, the 2016 AQMP provides the regional context for the project, especially considering the Basin is designated non-attainment for current and former federal and state ozone standards, as well as the current PM_{2.5} standards. Since the project will result in significant and unavoidable air quality impacts from NO_x and NO₂, it will hinder the South Coast AQMD's ability to meet the federal ozone standard and potentially the PM_{2.5} standards as NO_x is a precursor of both. Any exceedance of NO₂ standard at a site of a sensitive receptor also results in significant adverse

¹⁷ Recirculated Draft SEIR. 2018. Page 3.1-74.

¹⁸ Recirculated Draft SEIR. 2018. Pages ES-22 and 3.1-4.

impacts. Therefore, the project's consistency analysis with the 2016 AQMP should be quantitative (of project incremental emissions) and qualitative (of policy consideration).

South Coast AQMD staff is concerned that the Final SEIR removes lease measure AQ-23 for requiring periodic throughput reviews because this measure provides a check-in on the cargo growth that is needed to evaluate increases in the project's emissions and consistency with the 2016 AQMP, both quantitatively and qualitatively. Additionally, mitigation measures must be an essential nexus (i.e. connection) between them and a legitimate government interest, and be roughly proportional to the impacts of the project. (CEQA Guidelines Section 15162.4 (a)(4)). In order to know what new technologies and how frequently the tenant will be required to implement the identified technologies, the LAHD will need to know the project's air quality impacts to determine the project's fair share of contribution. Periodic reviews of throughout tracking help evaluate the project's air quality impacts, and determine the proportional share of mitigation fees that the tenant is responsible for contributing into the mitigation fee program. Therefore, lease measure AQ-23 is a necessary mechanism to ensure that lease measures AQ-1, AQ-3, and AQ-22 will meet applicable constitutional requirements for nexus and proportionality.

The LAHD Improperly Limits Its Own Legal Authority

In Response to Comment SCAQMD-9, the LAHD stated that 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. This response completely ignores the Port's market participant authority, which it has so vigorously defended in the courts. In its brief in opposition to petition for certiorari to the U.S. Supreme Court in *American Trucking Associations v. City of Los Angeles*, Case Number 11-798, the LAHD argued at page 12: "the essence of the market participant doctrine concerns whether a state is acting in a proprietary fashion as an owner of property or is engaged in regulation. As [the Supreme] Court stated in *Boston Harbor*: 'When a State owns and manages property...it must interact with private participants in the marketplace. In so doing, the State is not subject to pre-emption...because preemption doctrines apply only to state *regulation*.'" (*Emphasis in original.*) Therefore, if the LAHD believes it is preempted from requiring a particular feasible mitigation under CEQA, it should consider whether in its capacity as a landlord, it can require certain emission reduction measures acting as a market participant.

The LAHD Uses the Wrong Legal Test for Determining Feasibility

In Master Response 2 and Responses to Comments SCAQMD-3, 4, 8, 17, 23, 28, and 29, the LAHD applied the wrong legal test in determining feasibility by determining feasibility based on the current technologies and operating practices. The legal test is not whether the mitigation measure is feasible today; it is whether it is feasible in a reasonable period of time. CEQA Guidelines Section 15364. As this project has 20 years remaining on its lease (until year 2045), a reasonable period of time would include a period of several years at least. Even if the LAHD were correct in asserting that zero-emission trucks could not be deployed now, they certainly could be deployed within a reasonable time.

There are currently several research and demonstration programs being conducted by the Port of Los Angeles, South Coast AQMD, U.S. Department of Energy, California Energy Commission, and CARB to develop dedicated zero-emission truck and cargo handling equipment

technologies. As discussed in South Coast AQMD staff's comments in Attachment A of the September 29, 2017 letter and in Attachment B of the November 30, 2018, demonstrations are expected to be completed within the next several years and lay the foundation for commercialized products. South Coast AQMD staff believes that the first generation of zero-emission trucks will be available within the next five years, well within the required timeframe (before year 2045). These are the expert opinions of the South Coast AQMD's Technology Advancement Office staff, which constitutes substantial evidence that zero emission technologies can be commercialized in time for use for near-term deployments. (CEQA Guidelines Section 15384). Attachment B-1 includes a list of companies and resources that have zero-emission technologies available. This is supplemental information to Attachment B of South Coast AQMD staff's November 30, 2018 comment letter on the Draft Recirculated SEIR for the project.

The LAHD's feasibility assessments are improperly based on the current already on-sale technologies and ignore the fact that there is ample time to complete the demonstrations required during the period when the project is fully operational under Permit No. 999. The San Pedro Bay Ports' presentation at the July 24, 2019 Ports MOU Working Group Meeting #2 directly contradicts Master Response 2 and Responses to Comments SCAQMD-3, 4, 8, 17, 23, 28, and 29, which stated that the 2018 Feasibility Study for CHE¹⁹ by Tetra Tech/GNA showed that the CHE was not progressed enough to be considered commercially available and was not expected to be ready for operational development for the China Shipping project. However, at the July 24, 2019 Ports MOU Working Group Meeting #2, the Ports stated that the CHE Feasibility Assessment was based on a snapshot in time between 2018 and 2021 and did not account for future technological advancement. The Ports also stated that "battery electric RTGs, battery-electric and near-zero-emissions yard tractors may be feasible soon²⁰." It is important to note that at the same meeting, the Ports stated that the Truck Feasibility Study²¹ was also completed based on a snapshot in time between 2018 and 2021 and that "near-zero natural gas trucks and battery-electric trucks could be feasible soon²²." Therefore, the LAHD's responses in Master Response 2 and to Comments SCAQMD-3, 4, 8, 17, 23, 28, and 29 improperly required that the project be capable of successful implementation today, rather than "within a reasonable period of time", which is the proper legal test.

¹⁹ San Pedro Bay Ports. September 20, 2019. *Cargo-Handling Equipment Assessment*. Accessed at: <http://www.cleanairactionplan.org/tag/feasibility-assessment/>.

²⁰ San Pedro Bay Ports. July 24, 2019. *Update on CAAP Implementation MOU Working Group Meeting #3*. Accessed at: <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/facility-based-mobile-source-measures/ports-presentation-mou-wg2-7-24-19.pdf>.

²¹ San Pedro Bay Ports. September 20, 2019. *Clean Trucks Assessment*. Accessed at: <http://www.cleanairactionplan.org/tag/feasibility-assessment/>.

²² *Ibid.*

ATTACHMENT B-1
A List of Companies and Resources as
Supplemental Information on Zero Emission Technologies to Attachment B of South Coast
AQMD staff's November 30, 2018 Comment Letter

Equipment Type	Company Name	Contact Information
Battery electric repower of rubber tiered gantry (RTG) cranes	Cavotec	Cavotec USA, Cypress 5665 Corporate Avenue Cypress, CA 90630 (714) 947-005
Hybrid electric repower of RTG cranes	Mi-Jack Products	Aaron Newton, Vice President, Technology Sales and Marketing, anewton@mi-jack.com (317) 478-0996 Dan Zakula, Vice President, Technology, dzakula@mi-jack.com (708) 225-2306
Battery electric top handlers	Taylor Machine Works, Inc.	Taylor Machine Works, Inc.: https://www.taylorbigredforklifts.com/ Authorized Dealers in California: Cal-Lift, Inc 13027 Crossroads Parkway South City of Industry, CA 91746 (800) 322-5438 cal-lift.com 2026 West Valley Boulevard Colton, CA 92324 (800) 322-5438 Battery electric top handlers were launched on October 3, 2019. News release is available at: https://www.dcelocity.com/articles/20191003-port-of-l-a--debuts-battery-electric-top-handlers-for-cargo-loading/
Battery electric top handlers	BYD	George Miller, Senior Sales Manager - National Fleets. Electric Trucks BYD MOTORS LLC Build Your Dreams® 1800 S Figueroa St. Los Angeles, CA 90015 (213)748.3980 x58856 george.miller@byd.com
Battery electric forklifts	Wiggins Lift Co. Inc.	(805) 485-7821 info@wigginslift.com
Battery electric forklifts	Thor	Austin Benzinger, Director, Business Development and Government Affairs @ Thor (818) 316-1890

Additional examples of equipment in implementation at the greater San Pedro Bay Ports including the following:

RTG Cranes

- Port of Long Beach (POLB) START project will deploy Cavotec battery electric repowers of ZPMC RTG cranes at SSA Marine Pier J involving removal of on-board diesel engines with grid-connected electric conversion system and AC/AC battery package for disconnection from grid and block changing during normal operations.
- POLB RTG project will convert 6 ZPMC RTG cranes at SSA Marine Pier A to hybrid-electric-diesel RTG cranes with AC motors as retrofit replacements of existing high-power gensets manufactured by Mi-Jack. The gensets would be capable of operating about 50% of the RTG duty cycle.

Top Handlers

- POLB C-PORT project just deployed Taylor/BYD battery electric top handlers at Long Beach Container Terminal and SSA Marine at Pier E and Pier J, respectively.
- POLB START project will deploy Taylor/BYD battery electric top handlers at SSA Marine Pier J and Port of Oakland.

Forklifts

- POLB START project will deploy Wiggins and Wiggins/Thor 8,000 pound and 36,000 pound battery electric forklifts at SSA Marine and Port of Stockton.

Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project (HVIP)

The LAHD should consider state incentive programs to incentivize the purchase of zero-emission technologies for the China Shipping terminal. For example, in partnership with CALSTART, a national nonprofit organization that works with the public and private sectors to advance and drive the transportation industry towards cleaner technology, CARB created the HVIP in 2009. The HVIP was created to reduce price barriers, enabling fleets to adopt cleaner, heavy-duty commercial vehicles. The HVIP provides point-of-sale discounts to vehicle purchasers by working directly with truck and bus dealers to apply the voucher incentive at the time of purchase. HVIP vouchers make zero-emission and Low NOx buses and trucks as affordable as their traditional fossil-fueled counterparts at point of sale and reduce prices for medium- and heavy-duty hybrid vehicles. For more information on the HVIP, please see: <https://www.californiahvip.org/>.

Clean Off-Road Equipment Voucher Incentive Program (CORE)

On August 5, 2019, CARB announced that CALSTART will be administering a \$40 million Clean Off-Road Equipment Voucher Incentive Program (CORE). CORE is intended to

encourage California fleets to purchase or lease currently commercialized zero-emission off-road freight equipment, benefiting the citizens of California by providing immediate air pollution and greenhouse gas emission reductions, especially in disadvantaged communities within close proximity to the project. CORE will feature a streamlined voucher process for buyers to receive funding that will offset the higher costs of clean, zero emission technology, ranging from \$180,000 to \$500,000. All equipment in CORE must be zero emissions (battery or hydrogen). A list of CORE eligible equipment for use at marine ports and manufacturer information are provided as follows. For more information on CORE, please see: <http://californiacore.org/>.

Equipment Type	Company Name	Contact Information
Electric RTG cranes	ANUPAM-MHI	http://www.anupamgroup.com/ Electric Overhead Travel Cranes: http://www.anupamgroup.com/en/eot-cranes.aspx
Electric cable reel RTG cranes Electric busbar RTG cranes	Konecranes	https://www.konecranes.com/ For spare parts, please contact (800) 727-8774 or parts@konecranes.com Listed Companies in Southern California: Hoist Equipment in Santa Fe Springs, California 10310 Pioneer Boulevard, Suite 2 Santa Fe Springs, CA 90670 (562) 903-1371 Hoist Service in San Bernardino, California 1460 South Carlos Avenue Ontario, CA 91761 (909) 930-0108
Zero emission RTG cranes	E-One2	http://www.e-one.com/ Information on authorized dealers in United States is available at: http://www.e-one.com/us-canada-dealer-search/
Forklifts (greater than 8,001 pounds lift capability)	BYD: 15,000 pounds lift XL Lifts, Inc.: 20,000 – 36,000 or greater pounds	See above for BYD contact information. XL Lifts, Inc. 4572 Telephone Road, #908 Ventura, CA 93003 (805) 889-8487 info@xliftsinc.com
Container handling equipment	Taylor Machine Works, Inc. BYD	See above for Taylor Machine Works, Inc. contact information. See above for BYD contact information.
Shore power cable system	Not available at this time	Not available at this time