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Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement (RDEIR/SDEIS) for the Interstate 710 (I-710) Corridor Project (SCH No.: 2008081042)

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document for the I-710 Corridor Project (Proposed Project). The Proposed Project would modernize and increase capacity of the I-710 between Ocean Boulevard and State Route 60, a distance of approximately 18 miles. This is a key freight corridor connecting the ports to railyards and warehouses, and is important for the economic vitality of our region. At the same time, truck traffic on the corridor is a significant source of air pollution impacting the health of local communities and the region as a whole.

SCAQMD staff commends the Lead Agency for making improvement of air quality and public health an objective of the Proposed Project, and for including a dedicated Zero Emission/Near Zero Emission (ZE/NZE) freight corridor as one of the build alternatives for analysis in the RDEIR/SDEIS. SCAQMD supports efforts to integrate various inter-agency planning and funding opportunities to deliver air quality and public health benefits with accountable milestones. An effective and inclusive implementation process can also help avoid potential project delays due to litigation.

The SCAQMD has a long history working with the Caltrans to ensure that the Proposed Project facilitates the implementation and deployment of the lowest emission technologies. SCAQMD staff provided comments on the 2012 Draft EIR/SEIS[1] and the 2015 Air Quality Protocol[2]. However, some previous comments remain to be outstanding concerns. SCAQMD staff's comments on the RDEIR/SDEIS are set forth in the attachment. SCAQMD staff seeks a RDEIR/SDEIS which fully describes the Proposed Project's air quality impacts, feasible mitigation measures, enforceability, and accountability which supports effective action by the Lead Agency to meet the Project's objectives to improve air quality and public health. The following is a summary of key comments.

Need for Zero Emission Freight Corridor. The region's air quality has improved with reductions in the total number of days that the South Coast Air Basin (Basin) experiences ozone and PM2.5

[1] South Coast Air Quality Management District. 2012. http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2012/october/i-710-corridor-october-2012.pdf
[2] South Coast Air Quality Management District. 2015 http://www.aqmd.gov/docs/default-source/ceqa/comment-letters/2015/november/other710.pdf

particulate levels exceeding state and federal ambient air quality standards. Despite this progress, however, the region still has the most polluted air in the country, with substantial health impacts, including thousands of premature deaths per year. Mobile sources are the major contributor to the ozone and PM2.5 levels in this region. Heavy-duty diesel trucks are the largest source of nitrogen oxides (NOx) emissions—which react in atmosphere to form ozone and particulates—and are one of the major sources of directly emitted PM2.5. Diesel-powered equipment such as trucks traveling the I-710 corridor also contribute to significant local cancer risks. 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 I-710 study area are 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 million[3]. The build alternatives would result in near-roadway incremental emissions concentrations in a few areas very near the I-710 corridor. When the health impacts from the Proposed Project are added to those existing impacts, the affected communities will face an even greater exposure to air pollution and bear a disproportionate burden of increasing health risks.

Looking forward, emissions from new trucks are lower than emissions from older model years, but even with broad deployment of relatively new trucks, the region will need substantial additional emission reductions to attain the National Ambient Air Quality Standards (NAAQS). These needed reductions are particularly challenging because they are beyond the benefits of adopted rules and programs, and because the reductions already assume broad deployment of new trucks meeting the latest emission standards. On March 3, 2017, the SCAQMD's Governing Board adopted the 2016 Air Quality Management Plan (2016 AQMP)[4], which was later approved by the California Air Resources Board on March 23, 2017. Built upon the progress in implementing the 2007 and 2012 AQMPs, the 2016 AQMP provides a regional perspective on air quality and 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.

To accommodate growth and to achieve the emission reductions needed to comply with federal standards, the region will need to transition to the use of zero and near-zero emission technologies, particularly for trucks. The Proposed Project plays an important role in facilitating this transition. A variety of zero and near-zero emission technologies using on-road vehicles and fixed guideways are technically feasible, and the RDEIR/SDEIS includes zero and near-zero emission trucks in Project build alternatives. Several types of zero and near-zero emission trucks are beginning to be deployed or expected to be feasible within the timeframe of the I-710 Project. Ensuring deployment of such technologies will require collaborative efforts to establish requirements or incentives for their use, particularly on key transport corridors, and to create needed infrastructure for charging and fueling vehicles powered by electricity, fuel cells or hybrid technologies with zero emission capability (e.g. natural gas/electric hybrids). As a key truck corridor connecting to the region and nation, the I-710 Project can and should be part of the solution. In short, deploying zero emission trucks on the I-710 will allow the corridor to accommodate economic growth,

[3] 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.

[4] 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.

address local health risks, contribute to regional air quality attainment, and serve other policies such as energy security and climate.

Specificity of Zero-Emission Freight Corridor Component. In order to successfully implement a zero-emission freight corridor component to the Proposed Project, it is important that the Lead Agency provide specificities regarding the schedule and process for development, construction, deployment, selection, and implementation of the zero-emission truck technology in the Final EIR/SEIS. SCAQMD staff recommends that the following elements be incorporated in the Final EIR/SEIS. Details regarding zero emission technologies are included in Attachment A.

1. Establish a schedule for key actions to develop and deploy zero-emission technologies. The schedule should be consistent with the timelines and goals of the 2016 AQMP.
2. Determine zero-emission truck technology or technologies and any needed infrastructure before construction begins.
3. Develop requirements or incentives to ensure zero-emission freight corridor will be utilized.
4. Establish an I-710 implementation steering committee to provide guidance on the development and implementation of the zero-emission freight corridor.

Additional Comments on the RDEIR/SDEIS. SCAQMD staff has reviewed the air quality and health risk analyses in the DREIR/DSEIS, and has concerns about the CEQA baseline, air quality assumptions, criteria pollutant calculations, mitigation measures, and the modeling parameters and meteorological data. By using a 2012 CEQA baseline and assuming the approval of the BNSF Railroad Southern California International Gateway (SCIG) near-dock intermodal yard and the expansion of the UP Railroad near-dock intermodal Container Transfer Facility (ICTF) projects, the Lead Agency may have substantially underestimated the Proposed Project's potential significant adverse air quality and health impacts. Based on the SCAQMD staff's calculations, the Proposed Project would exceed SCAQMD's regional air quality CEQA significance thresholds for operation[5]. Therefore, the Lead Agency should consider additional mitigation measures to reduce those impacts to the maximum extent feasible. SCAQMD staff has included recommended mitigation measures that are capable of reducing significant adverse operational air quality impacts as guidance to the Lead Agency and should be incorporated into the Final EIR/SEIS. Details are included in Attachment B.

Thank you for the opportunity to provide comments on the RDEIR/SDEIS. We look forward to working with the Lead Agency to address the comments raised herein and any other questions that may arise. Please feel free to call me at (909) 396-2706, if you have questions or wish to discuss our comments.

Sincerely,

Michael Krause, Manager
Planning, Rule Development & Area Sources

[5] 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.

Attachments
LAC170721-01
Control Number

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^{TM} 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 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 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

ADDITIONAL COMMENTS ON THE RDEIR/SDEIS

SCAQMD Staff's Summary of Project Description

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro), the Gateway Cities Council of Governments (Gateway Cities COG), the Southern California Association of Governments (SCAG), the Ports of Los Angeles and Long Beach, and the Interstate 5 Joint Powers Authority (I-5 JPA) proposes to improve 19 miles of Interstate 710 (I-710) in Los Angeles County between Ocean Boulevard in the City of Long Beach and State Route 60 (SR-60) in East Los Angeles (Proposed Project). The alternatives evaluated in the Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact State (RDEIR/SDEIS) include Alternative 1 (No Build Alternative) and two build alternatives: Alternative 5C (I-710 Widening and Modernization) and Alternative 7 [I-710 Modernization plus a Zero-/Near Zero-Emission (ZE/NZE) Freight Corridor]. Alternative 7 also includes an advanced technology feature that allows groups of six to eight trucks to travel in platoon in order to increase the capacity of the freight corridor[6]. Option 7ZE is only applicable to Alternative 7 and restricts use of the freight corridor exclusively to ZE trucks[7]. The programmatic elements of the Proposed Project include ZE/NZE emission truck technology deployment program, expanded transit services, and community health and benefit program. It should be noted that the alternatives that were analyzed in the RDEIR/SDEIS represent the future scenarios for the I-710 Corridor. If Alternative 1 (No Build Alternative) is selected as the preferred alternative, the existing I-710 Corridor will maintain its current configuration. If one of the build alternatives is selected as the preferred alternative, the anticipated build-out year is 2035.

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

In the air quality analyses, the Lead Agency found that air toxics are substantially lower (95 percent or more) for the build alternatives when compared to the 2012 emissions, and the reductions are due to the turnover to diesel trucks that meet the EPA standards and deployment of ZE/NZE emission trucks[8]. Each of the build alternatives would result in lower emissions from NOx, CO, PM2.5, and VOC when compared to the 2012 baseline emissions, while PM10 and SO2 would increase for Alternative 7 in 2035. When each of the build alternatives is compared to the future "No Build Alternative," emissions from CO, PM10, PM2.5, and SO2 would increase, with the greatest increases under Alternative 7, but NOx emissions would be lower[9]. Due to increased traffic, both build alternatives result in greater near-road 24-hour PM10 impacts for several receptors located along the I-710 corridor[10] and a greater number of impacted receptors located near the corridor. The build alternatives have lower cancer risks and operational exhaust emissions, when compared to the 2012 baseline risks. The Maximum Incremental Cancer Risk (MICR) for the build alternatives were found to be less than SCAQMD's CEQA threshold of 10 in a million[11]. Reductions in cancer risks and exhaust emissions are primarily due to improved

[6] RDEIR/SDEIS. Executive Summary. Page 8.
[7] *Ibid*. Page 9.
[8] *Ibid*. Page 20.
[9] *Ibid*.
[10] *Ibid*.
[11] *Ibid*. Air Quality, Greenhouse Gas, and Health Risk Assessment Technical Study. Table 4-9a.

vehicle technology resulting from the implementation of federal, state, and local regulations and programs.

After a review of the air quality and health risk analyses and supporting technical documents of the build alternatives (Alternative 5C and Alternative 7) in the RDEIR/SDEIS, 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 contained herein prior to the certification of the Final EIR/SEIS.

Integrate CEQA Review with Related NEPA Environmental Review

1. The Lead Agency did not perform a project-level air quality conformity determination under the Clean Air Act for each of the build alternatives (Alternative 5C and Alternative 7) as part of the air quality analysis in the RDEIR/SDEIS. SCAQMD staff understands that while a conformity determination will be completed before the certification of the Final EIR/SEIS, this will not be subject to the same level of public review as the RDEIR/SDEIS. The public is not afforded the opportunity to participate in the review of the project-level air quality conformity determination in the same manner as the RDEIR/SDEIS. One of the fundamental CEQA policies requires integrating CEQA's requirements with other legally required planning and environmental review procedures such as the project-level conformity review under the Clean Air Act so as to have them run concurrently to the maximum extent feasible (Public Resources Code Section 21003(a) and CEQA Guidelines Sections 15006(i), 15080, and 15124(d)(1)(c)). The purpose of an integrated review process is to ensure that the environmental document will meet the needs of all the agencies which will use it (CEQA Guideline Section 15006(g)). Therefore, the Lead Agency should integrate the CEQA review for the Proposed Project as much as possible with the project-level air quality conformity determination, which serves as substantial evidence to support the finding that the Proposed Project would not conflict with or obstruct the implementation of the Air Quality Management Plan/State Implementation Plan[12].

CEQA Baseline

2. The Lead Agency chose a CEQA baseline year of 2012 for determining the air quality impacts from criteria pollutants for each alternative[13]. The 2012 baseline is held constant (i.e. using emission rates from 2012) and compared to future year 2035 (i.e. using emission rates from future year)[14]. This approach of using a comparison between the build alternatives' air quality impacts in future years (using emission rates from 2035) and a 2012 baseline (using emission rates from 2012) improperly credits the build alternatives with emission reductions that will occur due to adopted state and federal rules and regulations, since these rules and regulations are expected to improve air quality, even in the absence of Alternative 5C or Alternative 7 as the Proposed 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

[12] *Ibid.* Section 4.2.2.2, *Air Quality (CEQA Checklist Questions III.A and III.E)*. Page 4-14.
[13] *Ibid.* Executive Summary. Page 4.
[14] *Ibid.* Section 3.13, *Air Quality*. Pages 3.13-25 to 47. Section 4.2.4.1 *(CEQA Checklist Questions III.B, III.C, and III.D)*. Page 4-48 to 54.

2023[15]. The analysis in the RDEIR/SDEIS masks the potentially significant emission increases from the Proposed Project by taking credit for large emission reductions that have been achieved due to state and federal rules and regulations. The RDEIR/SDEIS should be revised to include a realistic baseline which accurately reflects the improvements in air quality that will occur, independent of the preferred alternative selected as the Proposed Project.

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 of the alternatives to the public and decision makers in order to provide them with the actual changes to the environment from the activities involved in each alternative. By taking credit for future emission reductions from existing air quality rules and regulations, the Lead Agency may have substantially underestimated the true impacts attributable to the Proposed Project's activities for VOCs, NOx, CO, PM10, PM2.5, and SOx emissions. Therefore, SCAQMD staff recommends that the Lead Agency revise the air quality analysis to include a comparison between the emissions in future interim year 2020, year 2025, year 2030, and year 2035 with Alternative 5C and the emissions in the same interim years without Alternative 5C, and use this comparison to determine the level of significance for Alternative 5C. Similarly, SCAQMD staff recommends that the Lead Agency revise the air quality analysis to include a comparison between the emissions in future interim year 2020, year 2025, year 2030, and year 2035 with Alternative 7 and the emissions in the same interim years without Alternative 7, and use this comparison to determine the level of significance for Alternative 7.

SCAQMD's Air Quality CEQA Thresholds of Significance

3. While CEQA permits a Lead Agency to apply a qualitative threshold to determine the level of significance, the Lead Agency may not apply a threshold of significance in a manner that precludes consideration of substantial evidence demonstrating that there may be a significant effect on the environment. Evaluation of air quality impacts, unlike some other impact areas, easily lends itself to quantification. Not only does quantification make it easier for the public and decision-makers to understand the breadth and depth of the potential air quality impacts, but it also facilitates the identification of mitigation measures required to reduce any significant adverse air quality impacts. SCAQMD's CEQA thresholds of significance for air quality provide a clear quantitative benchmark to determine the significance of a project's air quality impacts. Therefore, for most projects within SCAQMD's jurisdiction, SCAQMD's air quality CEQA significance thresholds for construction and operation [16] are used to determine the level of significance of a project's air quality impacts.

   The Lead Agency quantified the Proposed Project's construction emissions from criteria pollutants for Alternative 5C and Alternative 7 but did not compare those emissions to SCAQMD's air quality CEQA significance thresholds to determine the level of significance. The Lead Agency stated in the RDEIR/SDEIS that the California Department of Transportation (Caltrans) has not adopted any of SCAQMD's significance thresholds and that

[15] 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.

[16] South Coast Air Quality Management District. March 2015. *SCAQMD Air Quality Significance Thresholds*. Accessed at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

SCAQMD's significance thresholds is presented for information only[17]. The Lead Agency compared the emission results to the 2012 baseline to determine whether the emissions from the build alternatives would be higher or lower than the baseline without determining significance. SCAQMD staff recommends that the Lead Agency compare each build alternative's construction and operational emissions to SCAQMD's regional and localized air quality CEQA significance thresholds in the Final EIR/SEIS to determine the level of significance. Using SCAQMD's CEQA significance thresholds would clearly identify whether an alternative would result in significant air quality impacts, disclose the magnitude of the impacts, facilitate the identification of feasible mitigation measures, and evaluate the level of impacts before and after mitigation measures.

Air quality and HRA Analyses Assumption

4. One of the key assumptions for the air quality and HRA analyses was the BNSF Railroad Southern California International Gateway (SCIG) near-dock intermodal yard and the expansion of the UP Railroad near-dock intermodal Container Transfer Facility (ICTF) projects[18]. The RDEIR/SDEIS stated that those projects "are now considered reasonably foreseeable," and assumed that the SCIG project would effectively eliminate approximately 95 percent of the truck trips from using I-710[19]. The Final EIR for the SCIG project was certified by the Los Angeles Board of Harbor Commissioners in March 2013 but was later vacated by the Contra Costa County Superior Court in 2016. The Proposed Project's air quality and HRA impacts were calculated based on the reduction of truck trips due to the SCIG project. Therefore, this may have substantially underestimated the Project Project's air quality impacts. In order to disclose a worst-case impact scenario for the Proposed Project, SCAQMD staff recommends that the Lead Agency revise the air quality and HRA analyses based on the number of truck trips without the SCIG project in the Final EIR/SEIS.

Air Quality Analysis

Interim Milestone Years

5. The air quality analysis years for the RDEIR/SDEIS included only two analysis years: 2012 and 2035. By 2035, the Proposed Project is assumed fully built if any one of the build alternatives (Alternative 5C or Alternative 7) is selected as a preferred alternative with funding, and vehicle and truck fleets would meet the most stringent emission standards currently required. Although the Proposed Project may not be at peak capacity in earlier years, it is possible that due to higher emission rates of vehicles and trucks in earlier years that peak daily emissions may occur before 2035. The overall emission rates of vehicles and trucks are higher in earlier years as more stringent emission standards have not been fully implemented and fleets have not fully turned over. Therefore, SCAQMD staff recommends that the Lead Agency include interim milestone years (i.e., year 2020, year 2025, year 2030, and year 2035) in the Air Quality analysis to ensure the peak daily emissions are identified and adequately disclosed in the Final EIR/SEIS.

[17] RDEIR/SDEIS. Pages ES-28, ES-33, 3.3-139, 3.24-4.
[18] *Ibid*. Page 1-31.
[19] *Ibid*. Page 2-3.

Overlapping Construction and Operational Impacts

6. Based on a review of the project description, SCAQMD staff found that staging of construction activities would be required for the Proposed Project. Funding, right-of-way certification, maintenance of traffic, and contractor innovation are all variables that drive the timing, priority, and scope of staged construction[20]. Under these circumstances, one or multiple segments of the I-710 corridor may be under construction while other segments are in operation. When the overlapping construction and operation activities are anticipated, the Final EIR/SEIS should identify the overlapping years, combine construction emissions with operational emissions, and compare the combined emissions to SCAQMD's air quality CEQA operational thresholds to determine the level of significance.

Construction

7. Section S.5.3.2 – Relocations and Real Property Acquisition states that the build alternatives would result in the relocation of residential and nonresidential properties. Emissions generated from demolition and new construction of the acquired properties are not included in the emissions estimates for construction. Since relocation is foreseeable, SCAQMD staff recommends that the Lead Agency include those emissions in the Final EIR/SEIS.

8. The Lead Agency included aggregate crushing and processing equipment in the construction emission estimates, which only accounted for the emissions from the diesel internal combustion engines. Aggregate crushing and processing release particulate matter separate from the internal combustion engine. By not including the emissions from aggregate crushing and processing, the RDEIR/SDEIS has likely underestimated air quality impacts from construction. Furthermore, if SCAQMD permits are required for the equipment, SCAQMD should be listed as a responsible agency and will rely on the analysis in the Final EIR/SEIS for permit issuance. SCAQMD staff recommends including aggregate processing emissions into the construction emission estimates[21].

Localized Criteria Pollutant Analysis

9. The RDEIR/SDEIS did not evaluate potential localized air quality impacts that could result from construction of the Proposed Project. A localized air quality analysis would quantify potential air quality impacts that would occur near the Proposed Project during construction. This analysis is important for the Proposed Project because of the long duration and extent of construction activities, as well as the proximity of receptors to the Proposed Project. Therefore, SCAQMD staff recommends that the Lead Agency revise the air quality analysis to include an assessment of potential localized air quality impacts[22].

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[20] *Ibid*. Page 2-87.
[21] U.S. Environmental Protection Agency. AP 42, Fifth Edition Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources: https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors.
[22] The Localized Significance Threshold (LST) methodology and Mass Rate LST Look Up Table is available at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

Cumulative Air Quality Impacts Analysis

10. The Proposed Project is cumulative in nature both geographically and temporally. However, the RDEIR/SDEIS did not analyze potential air quality impacts from indirect or secondary effects as a result of induced growth, induced changes in the pattern of land use, population, and transportation improvements. Additionally, the RDEIR/SDEIS did not analyze potential air quality impacts from construction or operation of the Proposed Project on the rest of transportation network within and in the vicinity of the study area (e.g., I-5, I-105, I-405, SR-91, PCH 1) if one of the build alternatives is selected. For example, during construction of Alternative 7, there might be detours of vehicles and trucks to other transportation facilities. Therefore, SCAQMD staff recommends that the Lead Agency include a comprehensive assessment of the Proposed Project's potential cumulative air quality impacts in the Final EIR/SEIS.

Air Dispersion Modeling Parameters

11. The dispersion modeling analysis for the Proposed Project included constructed portions of the I-710 mainline. Because the Proposed Project has the potential to significantly alter traffic patterns in the adjacent communities, especially diesel truck traffic patterns, the dispersion modeling analysis should be expanded beyond the I-710 mainline, including major arterials, key roadway segments in the vicinity of the Proposed Project. At a minimum, the arterials and roadways that may have substantial volumes of diesel truck traffic greater than 5,000 trucks/day should be included, as well as those roadways that will transverse through or adjacent to residential neighborhoods.

12. In the air dispersion modeling, the Lead Agency used the non-default option "FASTALL". SCAQMD staff recommends using the default regulatory options or providing justification for using the non-default FASTALL option.

Meteorological Data

13. In the AERMOD Modeling Files provided by the Lead Agency, it stated that the POLB station was created by using surface measurements obtained from Scripps Pier monitoring station (KLGB,WMO 722970)[23]. KLGB is monitoring station code for the Long Beach Airport monitoring station, not the Scripps Pier monitoring station. SCAMQD staff recommends clarifying the statement.

14. In Section 5 of the Air Quality, Greenhouse Gas, and Health Risk Assessment Technical Study, the Lead Agency stated that "as multiple stations were selected to identify the meteorological profile of the AOI, the selected meteorological data can be considered as on-site data. As a result, only one year of data was used for air dispersion modeling." SCAQMD staff does not agree that the use of multiple meteorological stations constitutes these stations as on-site stations to justify that only one year of meteorological data is required. 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

[23] I710 Drive 2\AERMOD Modeling Files\AERMOD_Inputs_and_Outputs\aermet - README.TXT

five-year period are preferred[24]. Therefore, SCAQMD staff recommends that the Lead Agency update the modeling using the latest five years of available meteorological data.

Methodology for Determining Morbidity and Mortality Impacts

15. 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. On page 3.13-52 of the RDEIR/SDEIS, the Lead Agency described the qualitative methodology that was used to perform the mortality and morbidity analysis. By using total PM2.5 as a surrogate for localized primary PM-related morbidity and mortality health risks, the RDEIR/SDEIS found that mortality and morbidity health risks are expected to decrease based on future lower PM2.5 levels. SCAQMD staff recommends that the Lead Agency quantify the morbidity and mortality heath impacts and revise the PM mortality analysis and use the methods described in California Air Resources Board's 2010 guidance document[25].

Mitigation Measures

Deferred Analysis on Mitigation Measures

16. In the RDEIR/SDEIS, the Lead Agency proposed three air quality mitigation measures during operation of the Proposed Project. However, SCAQMD staff found that the discussion on mitigation measures was substantively lacking. First, on Page 4-50 of the RDEIR/SDEIS, the Lead Agency stated that "the only feasible additional mitigation measure that would further reduce emissions to levels below the SCAQMD thresholds would be to severely limit the total daily construction activity"[26]. The Lead Agency stated that if daily construction activities were limited, there would likely be extended construction period and increased construction costs[27]. However, there was no discussion in the Air Quality Section about how many more construction days or increased costs incurred if daily construction activities were to be limited due to significant air quality impacts. Second, there was no quantitative or qualitative analysis on the air quality impacts after incorporating the programmatic elements such as ZE/NZE trucks funding and Community Health Benefit Grant Program, which were used as substantial evidence to support the finding that air quality and public health in the corridor would be improved[28]. Third, on Page 4-54, the Lead Agency stated that localized increases in mobile source air toxics emissions were the result of increased total traffic volumes for which further mitigation of these emissions was not technically feasible because Caltrans does not control the emission characteristics of vehicles using the freeway. However, the Lead Agency has not demonstrated any evidence in the RDEIR/SDEIS to show any technical infeasibility.

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[24] 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.

[25] California Air Resources Board. August 31, 2010. *Estimate Premature Deaths Associated with Long-term Exposure to Fine Particle Pollution (PM2.5) 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.

[26] *Ibid*. Page 4-50.

[27] *Ibid*. Page 4-51.

[28] *Ibid.* Page 3.13-55.

CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize or eliminate any significant impacts. CEQA recognizes that a mitigation may require the cooperation of other agencies (e.g., CARB, EPA), and this does not make mitigation not feasible. Although the Lead Agency does not need to make determinations about authorities of other agencies in the RDEIR/SDEIS, it should consider and discuss potential mitigation measures and their ramifications on the air quality impacts, with and without mitigation measures, and if the ramifications on the air quality impacts would be different among the alternatives. Technological capacities, regulatory limitations, and jurisdictional boundaries are factors relevant to the "feasibility" of mitigation measures, which could be central to selecting a preferred alternative for the Proposed Project. Therefore, the formulation of mitigation measures should not be deferred to a later time or made the responsibility of other agencies.

Limits of Air Monitoring Stations: Mitigation Measure (MM) AQ-1

17. Mitigation Measure AQ-1 proposes to provide SCAQMD with funding for the design and construction of four new air quality monitoring stations within the I-710 Corridor. The new stations will monitor meteorology and criteria pollutant concentrations. Pursuant to CEQA Guidelines Section 15126.4, mitigation measures are those capable of minimizing or reducing significant adverse impacts. Monitoring and collecting air quality data should not be considered a mitigation measure since the air monitoring stations do no mitigate or reduce any impacts. Therefore, SCAQMD staff recommends that the Lead Agency revise MM AQ-1 by providing additional information on how the monitoring station data will be used to reduce the Proposed Project's significant air quality impacts.

Limits to Enhanced Filtration Units: Mitigation Measure (MM) AQ-2

18. The Lead Agency proposes to install enhanced filtration units to schools within 0.25 miles of I-710 that are currently lacking air filtration systems (MM AQ-2) [29]. Strategies available to reduce exposure, including, but are not limited to, building filtration systems, sounds walls, vegetation barriers, etc. Because of the potential adverse health risks involved with siting residences near a freeway, it is essential that any proposed strategy must be carefully evaluated before implementation. When enhanced filtration units are proposed, the Lead Agency should consider the limitations of the enhanced filtration. For example, in a study that SCAQMD conducted to investigate filters[30], costs were expected to range from $120 to $240 per year to replace each filter. In addition, because the filters would not have any effectiveness unless the HVAC system is running, there may be increased energy costs. It is typically assumed that the filters operate 100 percent of the time while residents are indoors, and it does not account for the times when residents have their windows or doors open or are outside in common areas. These filters also have no ability to filter out any toxic gases from vehicle exhaust. The presumed effectiveness and feasibility of any filtration units should therefore be evaluated in

[29] *Ibid*. Page 3.13-56.

[30] This study evaluated filters rated MERV 13+ while the proposed mitigation calls for less effective MERV 12 or better filters. Accessed at: http://www.aqmd.gov/docs/default-source/ceqa/handbook/aqmdpilotstudyfinalreport.pdf. Please also see the 2012 Peer Review Journal article by SCAQMD staff. Accessed at: http://d7.iqair.com/sites/default/files/pdf/Polidori-et-al-2012.pdf.

greater detail prior to assuming that they will sufficiently alleviate near roadway exposures. Further, since filtration units must be maintained and replaced on a regular basis, the Lead Agency should provide additional details on the maintenance and replacement method, schedule, and/or responsible implementing agency to ensure that MM AQ-2 is enforceable throughout the lifetime of the Proposed Project.

Recommended Changes to MM AQ-2

19. As described above, MM AQ-2 is limited to providing enhanced filtration units to schools within 0.25 mile of I-710. Sensitive receptors are people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptors include schools, parks and playgrounds, daycare centers, nursing homes, hospitals, and residential dwelling units. Therefore, SCAQMD staff recommends revising MM AQ-2 to include all of the sensitive receptors within 0.25 mile of I-710 as follows.

AQ-2 To further reduce exposure of children and other people to near roadway emissions, air filtration systems shall be provided for any of the following schools and sensitive receptors, including daycare centers, nursing homes, hospitals, and residential dwelling units within 0.25 mile of I-710 that currently lack adequate air filtration systems. As stated in the California Air Resources Board (ARB) *Technical Advisory* (April 2017), high-efficiency filters in ventilation systems can remove from 50 to 99 percent of the particles in the air. Determination of adequate air filtration systems ~~will~~ shall be addressed during coordination with the respective school districts or administrations and sensitive receptor facilities based on current building codes as well as guidelines set forth by the United States Environmental Protection Agency (EPA) and the SCAQMD before certification of the Final EIR/SEIS.

Recommended Changes to MM CON-AQ-15

20. The Proposed Project's construction emissions were modeled based on the assumption that all construction equipment will meet U.S. EPA Tier 4 emission standards. To ensure that the requirement of Tier 4 off-road construction equipment is enforced during construction, and to be consistent with the air quality modeling assumption, SCAQMD staff recommends incorporating the following revision to construction mitigation measure CON-AQ-15[31]:

CON-AQ-15 (see Section 3.24.4.13):

~~Dependent upon the responsible agency that administers the construction contract, c~~Construction equipment greater than 50 bhp ~~may~~ shall meet equivalent emissions performance to that of United States Environmental Protection Agency (EPA) Tier 4 standards and California Air Resources Board (ARB) requirements for non-road engines~~, if such construction equipment is available~~. All construction equipment shall be outfitted with best available control technology (BACT) devices certified by ARB. A copy of each unit's certified tier specification, BACT documentation, and ARB or SCAQMD operating permit shall be provided at the time of

[31] *Ibid*. Page 4-86.

mobilization of each applicable unit of equipment. Contractor(s) should keep records to be able to demonstrate compliance with this mitigation measure. Metro's Green Construction Policy would be utilized ~~if Metro administers the construction contract~~.

Recommended Changes to MM CON-AQ-17

21. CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized to minimize or eliminate any significant impacts. It is expected that all trucks and buses would need to be replaced and that all will have 2010 model year engines or equivalent emissions by year 2023[32]. Since 2010 model year trucks are expected to be available during the implementation of the Proposed Project (build-out year is 2035), SCAQMD staff recommends that the Lead Agency revise MM Con-AQ-17 in the Final EIR/SEIS.

CON-AQ-17 (see Section 3.24.4.13):

On-road, heavy-duty trucks that meet the ARB's ~~2007~~ 2010 or cleaner certification standards for on-road diesel engines, and compliance with State on-road regulations.

New Mitigation Measure: MM AQ-4 – Performance Standards-Based Technology Review

22. The build 2035 alternatives include ZE/NZE truck technology deployment program, and Alternative 7 includes an additional platooning technology. Technology is transforming transportation. As it continues to advance, the Lead Agency should take this opportunity to develop a pathway to ensure the deployment of the lowest emission technologies possible in the life of the Proposed Project. To facilitate the deployment, 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 Proposed Project is approved, and specify performance standards for the technology assessment.

Other Enforceable Mitigation Measures

23. As described in Comments 4 to 10, the Proposed Project's true air quality impacts may have been substantially underestimated and 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 and truck trips assumption to calculate emissions. Moreover, the Proposed Project is an important project and provides the necessary infrastructure to support the region's movement towards zero-emission technology. The Lead Agency should use the Proposed Project as an opportunity to take more aggressive actions to accelerate zero-emission technologies (see Attachment A: Zero Emission Truck Technologies). To ensure successful implementation of the strategies, SCAQMD staff recommends that the Lead Agency use a performance based standard and an enforceable ZE/NZE implementation plan be included as part of the Final EIR/SEIS. The implementation

[32] California Air Resources Board. August 19, 2014. Accessed at: https://www.arb.ca.gov/msprog/onrdiesel/documents/FSRegSum.pdf.

plan should include schedules, criteria for setting and assessing progress, and the process for evaluating the effectiveness of ZE technologies that should support the air quality attainment goals and attainment timelines of the 2016 Air Quality Management Plan.

SCAQMD Permits

24. The Lead Agency intends to use portable cement manufacturing, aggregate crushing, and screening equipment for approximately 10 years. Article 5 and Section 2450 to 2465 of Title 13, California Code of Regulation establishes a statewide program for the registration and regulation of portable engines and equipment units (Portable Equipment Registration Program – PERP). In the event that the engine or equipment unit that will be used for the Proposed Project do not meet the definition of portable engine or equipment unit, the Lead Agency would be required to obtain SCAQMD permits for aggregate equipment and operations.

Compliance with SCAQMD Rules

25. The Final EIR/SEIS should include a discussion on how the Proposed Project will comply with the following SCAQMD Rules:

- Rule 201 – Permit to Construct – The Lead Agency should obtain written authorization for the construction/installation of any equipment that may cause or control air contaminants. If there are permit questions concerning the aggregate processing equipment, they can be directed to SCAQMD Engineering and Compliance staff at (909) 396-2315. SCAQMD should be identified as a responsible agency in the Final EIR/SEIS.

- Rule 203 – Permit to Operate – The Lead Agency should obtain a written permit to operate. If there are permit questions concerning the aggregate processing equipment, they can be directed to Engineering and Compliance Staff at (909) 396-2315. The SCAQMD should be identified as a responsible agency under CEQA.

- Rule 1157 – PM10 Emission Reduction From Aggregate and Related Operations – The Lead Agency should discuss and provide additional details on how the project will comply with Rule 1157.

- Rule 403(e) – Large Operations – The Proposed Project is a large operation (50 acres or more of disturbed surface area; or daily earth-moving operations of 3,850 cubic yards or more on three days in any year) in the South Coast Air Basin. The Lead Agency is required to comply with SCAQMD Rule 403(e) – Additional Requirements for Large Operations[33]. The requirements may include, but are not limited to, Large Operation Notification (Form 403 N), appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control in the South Coast Air Basin training class[34].

[33] *Ibid.* Rule 403. Last amended June 3, 2005. Accessed at: http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-403.pdf.

[34] SCAQMD Compliance and Enforcement Staff's contact information for Rule 403(e) Large Operations is (909) 396-2608 or by e-mail at dustcontrol@aqmd.gov.