South Coast Air Quality Management District
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Via Email and U.S. Mail

February 1, 2012

Chris Cannon
Director of Environmental Management
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731

Dear Mr. Cannon:

Draft Environmental Impact Report
Southern California International Gateway (SCIG) Project

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Southern California International Gateway (SCIG) Project. Our comments seek an EIR that fully evaluates and discloses environmental impacts of the project, and that identifies for the proposed project's decision makers all feasible measures to mitigate significant impacts. Air quality impacts of the Proposed SCIG project must be carefully evaluated and mitigated because the railyard will be one of the largest intermodal facilities in the nation, and will be located near residences, schools, a pre-school, and a veterans center. The West Side neighborhood of Long Beach is home to approximately 13,500 residents[1] and lies between the project site and the I-710 freeway, but as close as 1,000 feet from the proposed project. In addition, Hudson School, an elementary and middle school with over 1,000 students, is less than 600 feet from the eastern boundary of the proposed Project site[2]. The Mary Bethune School and Cabrillo Child Development Center are less than 500 feet from the eastern boundary of the proposed site. See Figure 1.

The Draft EIR shows that the Proposed SCIG project will generate significant localized air quality impacts. Localized air quality impacts are characterized by air quality impacts that directly affect the areas surrounding the proposed project site. Based on the DEIR, the Proposed SCIG project will generate localized NO2 and PM10 concentrations and would exceed the applicable significance thresholds by more than 300% and 2,300%, respectively. In addition, the DEIR concluded that that the proposed project would result in significant localized PM2.5 impacts. These NO2 and PM10 concentrations from the proposed project will impact residents, school children and other sensitive populations near the proposed railyard.

Under CEQA, the lead agency must adopt all feasible measures to mitigate significant air quality and health impacts. The DEIR, however, lacks *any* mitigation for NO2 impacts, and the only

[1] Based on 2010 census data for census tracts 572301, 572500, 572600,572800, and 575500.
[2] http://lbhudson.schoolloop.com/schoolaccountability

mitigation for PM is street sweeping — which is not sufficient to fully mitigate this significant impact. Additional measures clearly are feasible. For example, zero-emission technologies such as electric trucks to transport containers between the ports and the railyard could be deployed early in the operational life of the railyard, and deployment of Tier 4 locomotives could be accelerated. The Proposed SCIG Project can and must incorporate the following measures or alternatives to mitigate significant local NO2 and PM10 impacts to the surrounding community:

1. **Zero-Emission Container Movement Between Marine Terminals and SCIG.**
   Use of zero-emission container transport, where the vehicle or system that does not create tailpipe emissions, as follows:
   - By 2016, at least 25% of container transport between the terminals and SCIG shall be by zero emission technology (with potential modification of requirement based on specific findings).
   - By 2020, 100% of container transport between the terminals and SCIG shall be by zero emission technology.
2. **Tier 4 Line-Haul Locomotives Entering SCIG.**
   - By 2018, at least 25% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.
   - By 2020, at least 95% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.
3. **Evaluation and Demonstration of Zero-Emission Line-Haul Locomotives.**
   - Evaluation of traditional electrified line-haul locomotive technologies to be completed by 2013.
   - Technology demonstrations of new zero-emission line-haul locomotive technologies to begin no later than 2013.
4. **Cooperative Actions by Project Applicant.**
   Establish project approval conditions requiring project applicant to cooperate with actions to implement paragraphs 1 thru 3 above.

Improper Baseline

In addition to significant NO2 and PM concentrations identified in the DEIR, the project may create additional significant impacts to regional air quality -- or substantially more severe local impacts -- that are not disclosed or mitigated in the DEIR. This is due to the improper baseline used in the DEIR to evaluate impacts. SCAQMD staff previously filed two comment letters regarding this deficiency.[3] As noted in those letters, the Draft EIR fails to disclose the impacts of the project because it credits the proposed project with improvements in air quality that will occur independent of the proposed project due to adopted state and federal rules. This error has real-world implications since the lead agency will not be required to apply feasible measures or alternatives that would avoid or lessen the impacts.

If DEIR based its conclusion of significance on the correct baseline, the residential cancer risk would be significant. The analysis in Appendix C3 (Page C3-68) presents the impacts of the proposed project relative to the "floating" baseline, which is the correct baseline. This analysis

[3] SCAQMD letter dated November 30, 2011 to Mr. Christopher Cannon; SCAQMD letter dated January 19, 2012 to Mr. Christopher Cannon.

is presented as additional information, but was not used to determine the project's significance or the need for mitigation. This analysis discloses that, contrary to the conclusions in the body of the DEIR, if the correct baseline was used the proposed project will increase the residential cancer risk by 17 in a million, a level that is in excess of the CEQA significance threshold established by SCAQMD and used by the port, and is a greater impact than allowed by the port's Clean Air Action Plan Project Conditions. The significance determination must be based on the correct baseline and disclose that the proposed project will have a significant increase in the residential cancer risk.

Analysis of Hobart-Related Trucks

The DEIR failed to analyze and disclose the impacts at BNSF's Hobart Railyard (Hobart) implying that this railyard will be nearly vacant if the Proposed SCIG facility is built. The DEIR assumes that the proposed project will eliminate 95 percent of truck trips between the ports and Hobart (Page 2-11). As a result, the DEIR increases the baseline emissions to account for trucks and locomotives that are currently handling containers at the Hobart Railyard, but fails to analyze truck trips associated with Hobart capacity that will be freed up as a result of building SCIG. There has been no indication that Hobart will be vacant or that BNSF will reduce its capacity. The DEIR must evaluate the extent to which capacity opened up at Hobart by construction of SCIG will be filled with other cargo, e.g. domestic freight containers.

Availability of Modeling Files

In our December 15, 2005 comment letter on the Notice of Preparation for the project, AQMD staff requested that the lead agency "send with the Draft EIR all appendices or technical documents related to the air quality analysis and electronic versions of all air quality modeling and health risk assessment files." On November 15, 2011, AQMD staff again requested the supporting technical files for the Draft EIR from the lead agency. Although Port of Los Angeles staff committed to providing these files, AQMD staff needed to send at least five more requests over the next two months before we received the first incomplete set of files on January 17, 2012. After informing lead agency staff of the incompleteness of the technical data, the final set of files was not received by AQMD staff until January 31, 2012, one day before the close of the comment period.

The DEIR makes air quality significance determinations based upon an extensive technical analysis including detailed calculations and dispersion modeling. A brief summary of this analysis was presented in the Air Quality Chapter of the DEIR with more detailed summaries contained in three technical appendices. However, the actual calculations and modeling used to support the significance determinations were not made available with the release of the DEIR. Because SCAQMD is the agency responsible for ensuring ambient air quality standards are met in the South Coast Air Basin, and SCAQMD staff has the technical expertise to thoroughly evaluate air quality analyses conducted under CEQA, it is standard practice for lead agencies to provide electronic copies of all technical files to SCAQMD for review during the EIR comment period. As an example, the Port of Los Angeles has submitted supporting technical files for port projects, such as the recent APL project and the China Shipping project in 2008.

CEQA guidelines §15105 provides for a minimum 45 day review period for an EIR, while §15147 provides that "highly detailed and technical analyses" may be placed in an appendix

rather than the main document, but that any appendices "shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review." Given the delay in making the files available, we appreciate that the lead agency has granted our agency a two week extension to review the modeling files. However, it is uncertain at this time if the two week extension is sufficient to enable full review.

Cumulative Analysis

Chapter 4 of the DEIR presents the Cumulative Analysis. The analysis lacks sufficient detail to adequately evaluate the lead agency's findings. Specifically, the combined ICTF/SCIG analysis should include additional information related to the individual contributions of each project, rather than just presenting the components together. The public needs to understand the impacts of each project individually, as well as jointly, so that a clear picture of the impacts and potential mitigation measures and alternatives can be obtained. This should be feasible since we understand that the release of the ICTF DEIR is imminent. It is also our understanding that oversight of the two projects is being handled by the POLA staff so that information for both projects should be available.

Need for Recirculation

CEQA Guidelines requires a Lead Agency to recirculate an EIR when significant new information is added showing a "a new significant impact would result from the project." The DEIR found that the residential cancer risk is 17 in a million when using the correct baseline, which would change the conclusion from insignificant to significant which would trigger recirculation. There a number of issues as outlined in our comments where the emissions and air quality impacts we believe are underestimated such as the number of truck trips, DTL fueling, locomotive idling, switcher use, construction emissions to transport cranes, to name a few. We believe that when these issues are properly analyzed it will disclose new significant impacts and substantial increases to existing impacts and therefore require recirculation.

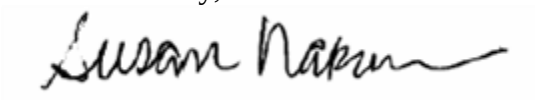
Finally, the ports have authority to establish environmental conditions as part of project approvals for rail facilities. It is essential that the Port get the particulars regarding this project right during the initial project approval. As the ports and local governments throughout the region are aware, the Class I railroads have a history of using federal law to block environmental mitigation for their activities. The railroad would likely use the same legal strategy for any mid-course corrections to reduce the environmental impacts after project approval. Tier 4 locomotives and zero-emission technologies are needed to mitigate local health impacts; they also will be needed for future Air Quality Management Plans and Regional Transportation Plans to show compliance with federal law and avoid jeopardizing transportation funding. The port thus needs to use its initial project approval to ensure that long-term environmental needs will be met.

Attached are more details regarding these and other comments. The AQMD staff is still reviewing air dispersion modeling files were received in mid-January. The AQMD staff will provide additional comments on the dispersion modeling within the next few weeks.

Pursuant to Public Resources Code Section 21092.5, please provide the SCAQMD with written responses to all comments contained herein prior to the adoption of the Final Environmental

Impact Report. The SCAQMD staff appreciates the opportunity to comment on this important project. We look forward to working with the Port of Los Angeles on this and future projects. If you have any questions, please call me at (909) 396-3105.

Sincerely,



Susan Nakamura
Planning Manager

Attachments

Attachment A
Additional Comments on the DEIR for
Southern California International Gateway (SCIG) Project

The following includes specific comments on the DEIR for the Proposed Southern California International Gateway (SCIG) Project.

Additional Measures are Required to Mitigate Significant Impacts

The proposed SCIG project will one of the largest intermodal railyards in the United States and will be located near residences, schools, a pre-school, and a veterans center. The West Side neighborhood of Long Beach is home to approximately 13,500 residents[4] and lies between the project site and the I-710 freeway, but as close as 1,000 feet from the proposed project. In addition, Hudson School, an elementary and middle school with over 1,000 students, is less than 600 feet from the eastern boundary of the proposed Project site[5]. The Mary Bethune School and Cabrillo Child Development Center are less than 500 feet from the eastern boundary of the proposed site. See Figure 1.

The Proposed SCIG Project will result in significant localized impacts of NO_2 and PM10. As depicted in Figure 2 below, NO_2 is expected to exceed federal standards over a wide area, including population centers in west Long Beach and Wilmington. Concentrations of NO_2 in the community from the project alone are predicted to exceed the federal standard by at least a factor of five (Table 1 below). The modeled point of maximum NO_2 impact is located adjacent to the relocated tenants south of the project site. PM10 impacts are predicted to exceed the annual and 24-hour SCAQMD Air Quality Significance Threshold by a factor of about 20. The area of PM10 impact also extends into the west Long Beach community adjacent to the SCIG facility (Figure 3 below).

[4] Based on 2010 census data for census tracts 572301, 572500, 572600,572800, and 575500.
[5] http://lbhudson.schoolloop.com/schoolaccountability

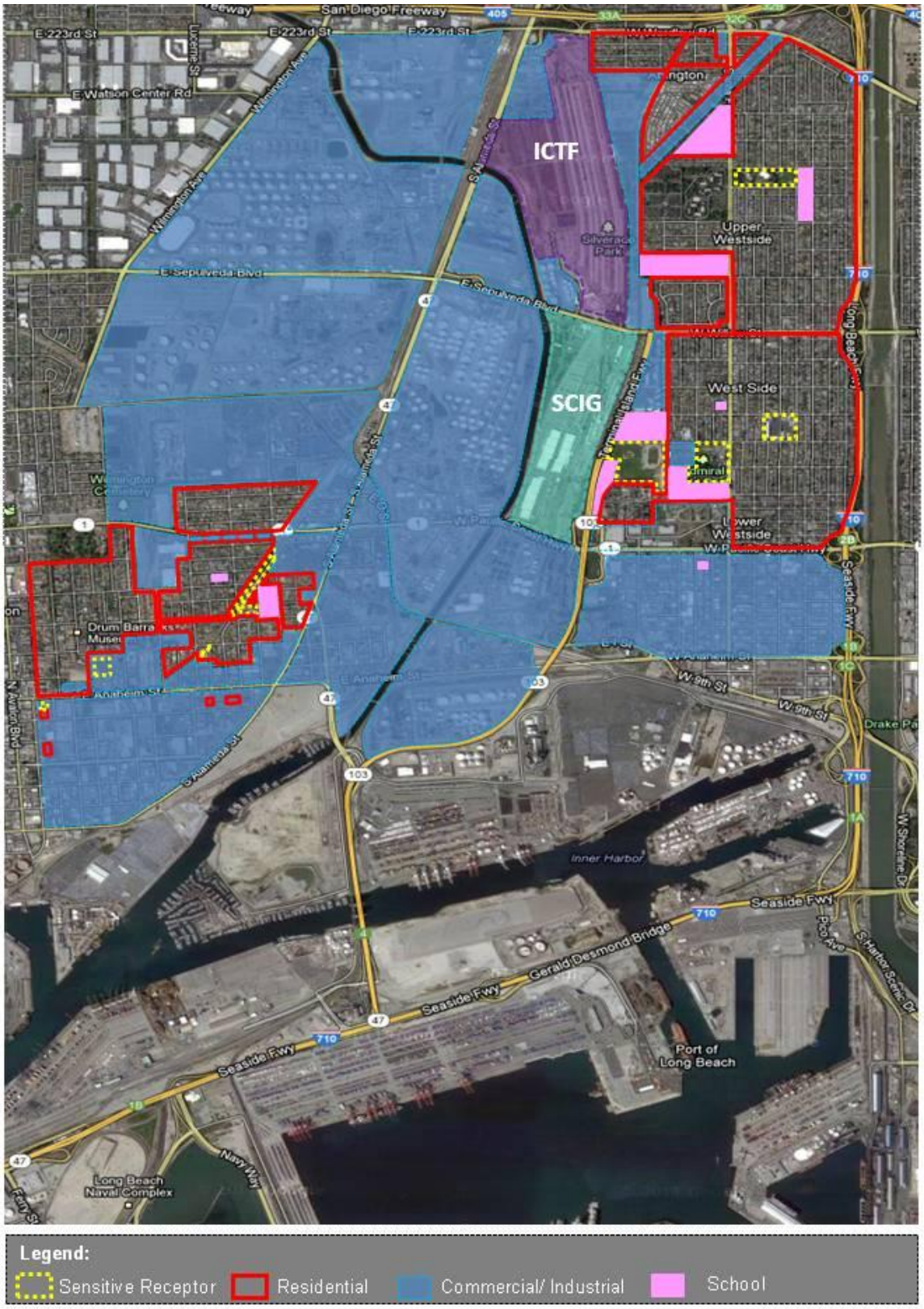


Figure 1: Surrounding Residential and Sensitive Land Uses Near Proposed SCIG Facility

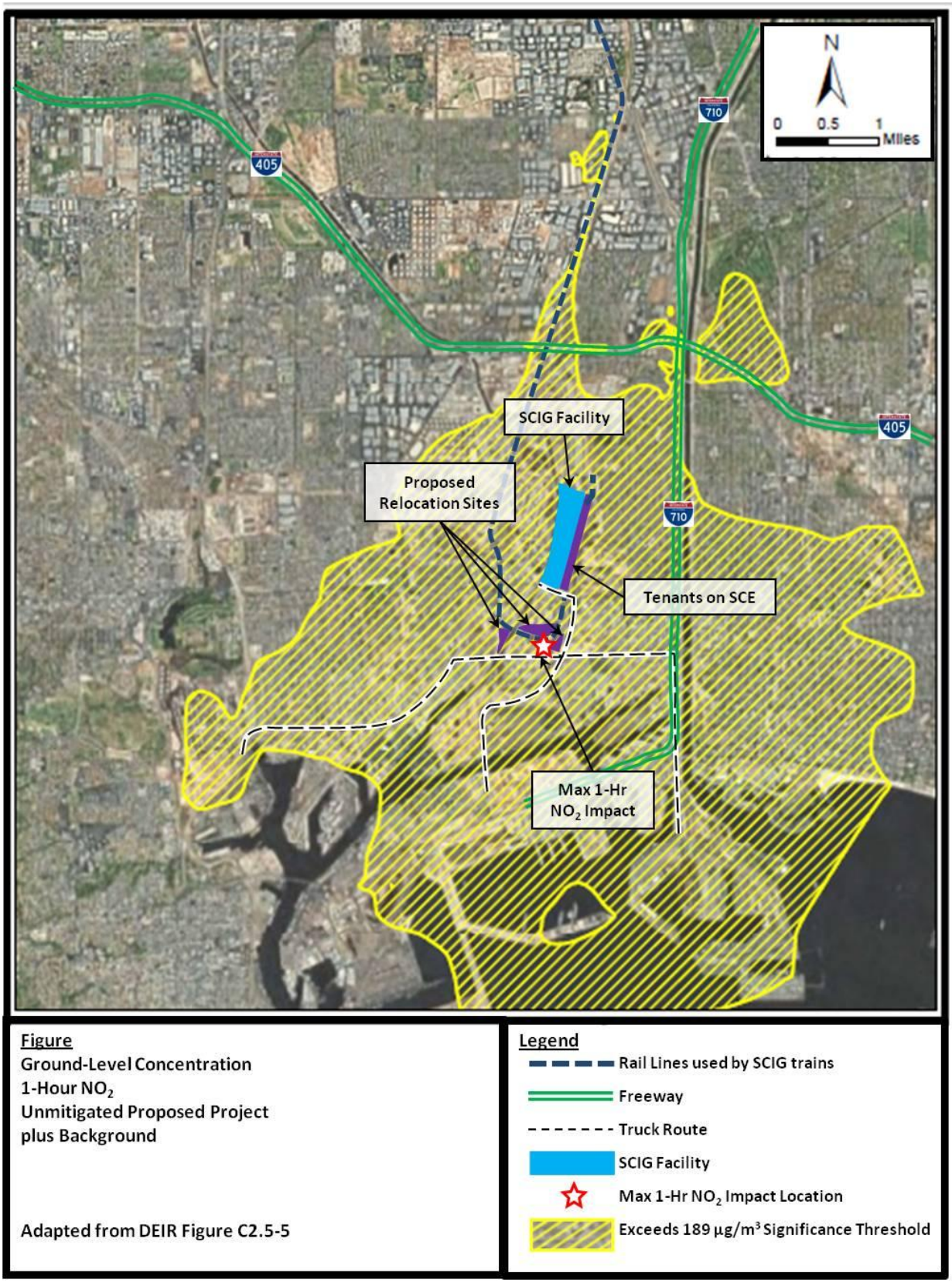


Figure 2: 1-Hour NO_2 Unmitigated Impacts

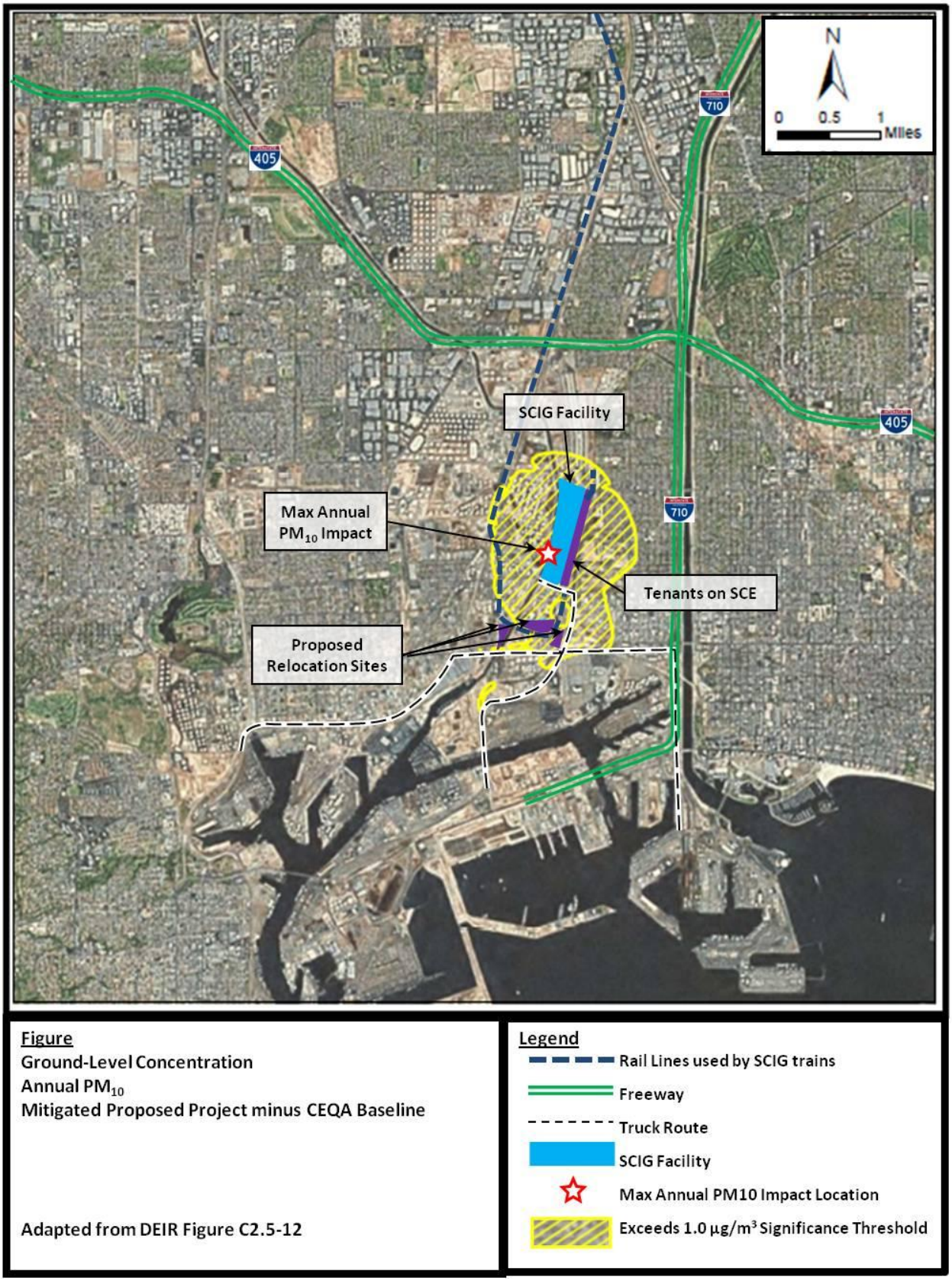


Figure 3: PM10 Unmitigated Impacts

Table 1

Pollutant	Predicted Concentration from Project Emissions ($\mu g/m^3$)	Threshold ($\mu g/m^3$)
NO_2 1-hour[a] (federal)	996	189
PM_{10} Annual[b]	24.6	1.0
PM_{10} 24-hour[b]	43.6	2.5

[a] Data from Table C2.5-13 of the Draft EIR
[b] Data from Table C2.5-14 of the Draft EIR

Based on data presented Table C.2.5-15 (reprinted in Table XX below), the primary source of NO_2 emissions at the point of maximum impact are the Tenant Onsite Trucks. The primary source of emissions at the point of maximum impact for PM_{10} is the SCIG Onsite trucking activity. However, this information cannot be used to determine if these same sources are driving the significant impacts for all areas. For example, because the NO_2 impacts covers such a wide geographic extent, it would seem that the 1,995,000 SCIG drayage trucks in 2023 are likely to be more important than the 91,456 Tenant Onsite Trucks in areas far removed from Tenant Onsite Truck activity. Because the lead agency failed to provide the modeling files to SCAQMD staff in a timely manner, the SCAQMD was unable to properly evaluate this issue.

Exposure to NO2 can result in a range of adverse health effects. Current scientific evidence links short-term NO_2 exposures, ranging from 30 minutes to 24 hours with an array of adverse respiratory effects including increased asthma symptoms, more difficulty controlling asthma, and an increase in respiratory illnesses and symptoms. In addition, studies also show a connection between short-term exposure and increased visits to emergency departments and hospital admissions for respiratory illnesses, particularly in at-risk populations including children, the elderly and asthmatics.

Moreover, the project may create additional significant impacts to regional or local air quality, or substantially more severe impacts to local air quality, that are not disclosed or mitigated. This is due to the improper baseline used in the DEIR to evaluate impacts. SCAQMD staff previously submitted two comment letters regarding this deficiency.[6] These letters note that the DEIR evaluates impacts by comparing future emissions with the project, to emissions levels back in 2005 — prior to adoption of the Clean Air Action Plan and state and federal rules limiting emissions from locomotives and trucks. This analysis does not disclose or mitigate the impacts *of the project* as required by CEQA. This so because the analysis credits the project with emission reductions unrelated to the project, and it does not in any way compare future emissions with the project to future emissions without the project. For some impacts, such as cancer risk, the DEIR concludes that the project will have no impacts or beneficial impacts, even though the project will cause greater health risks in some locations than would occur without the project.

We appreciate that the DEIR includes a comparison of future cancer risks with and without the project in an appendix, but that analysis is not used to identify significant impacts (Appendix C3, Page C3-68). Under the circumstances of this project, this type of analysis must be used to identify significant impacts and to evaluate the need for mitigation. It is also important to note

[6] SCAQMD letter dated November 30, 2011 to Mr. Christopher Cannon; SCAQMD letter dated January 19, 2012 to Mr. Christopher Cannon.

that the analysis of cancer risks in the appendix which does compare future risks with and without the project discloses that the project will increase cancer risk by 17 in a million at the point of maximum impact. That point is in a residential area. This is in excess of the CEQA significance threshold established by SCAQMD and used by the port, and is a greater impact than allowed by the port's Clean Air Action Plan Project Conditions. These are additional reasons why, under CEQA, feasible mitigation measures must be applied.

Additional Measures to Mitigate Significant Impacts are Feasible

The DEIR lacks *any* mitigation for NO_2 impacts, and the only mitigation for PM is street sweeping — which is not sufficient to fully mitigate this significant impact. Localized NO_2 and PM10 caused by the project can be further mitigated. The Proposed Project can and must incorporate the following three mitigation measures or project alternatives which would mitigate significant localized NO_2 and PM10 impacts to the surrounding community: (1) zero-emission container movement between marine terminals and SCIG; (2) greater acceleration of use of Tier 4 line-haul locomotives; and (3) evaluation and demonstration of zero-emission line-haul locomotives. To ensure these elements are carried out, the project applicant should be required to cooperate in their implementation. The elements and actions are discussed in more detail below.

Zero-Emission Container Movement Between Marine Terminals and SCIG

As is described in Attachment B, the proposed project must include a measure that requires transport of containers using zero-emission technology that does not create tailpipe emissions from the vehicle or system transporting containers. Such a measure or project alternative is required by CEQA to be included in the EIR in order to mitigate the significant impacts of the project. Zero-emission container transport technologies can and must be implemented beginning 2016 as follows:

- **By 2016, at least 25% of container transport between the terminals and SCIG shall be by zero-emission technology.**
- **By 2020, 100% of container transport between the terminals and SCIG shall be by zero-emission technology.**

Considering the current levels of product development, it is clear that, if the lead agency provides a clear message to technology providers that zero-emission technologies will be needed and when, such technologies can be commercialized in sufficient time to begin operational deployment between the ports and SCIG between by 2016, with 100% deployment by 2020. (See Attachment B - Zero-Emission Container Transport). The measure described above will send such a clear market signal to technology developers and allow this schedule to be met.

Potential Modification of 2016 Requirement. SCAQMD staff would support allowing modification of the 2016 requirement for 25% of containers to be moved with zero-emission technology, under specified conditions. This would allow the lead agency flexibility in phasing in new technology without jeopardizing the ultimate level of mitigation. Specifically, AQMD staff would support allowing the Harbor Commission to modify the 2016 requirement as follows:

> **The Harbor Commission may reduce the percentage of containers required to be transported by zero-emission technologies in 2016 if the Commission makes findings based on substantial evidence that (1) it is not practicable to implement such requirement without the modification (2) the Commission has adopted enforceable interim milestones to implement zero-emission transport to the extent possible and as early as possible, and (3) the modification will not jeopardize achieving 100% zero-emission transport by 2020. A modification pursuant to this paragraph shall be approved at a public meeting of the Harbor Commission, after public review of a staff report fully describing the reasons for such extension. No modification may be approved prior to 2015, and such modification shall not be to zero.**

Modifications to the 2020 requirement for 100% zero-emission transport would not be allowed since zero-emission technology can certainly be available in time to deploy sufficient numbers of zero-emission trucks or other technology by that time (see Attachment B). Allowing modification of the 2020 requirement would also undermine the market signals that are important to ensure technology availability, and allow unmitigated impacts as the railyard approaches full capacity operation.

Zero-Emission Container Movement Is Feasible Under CEQA Because it Can Be Implemented Within a Reasonable Period of Time; *The DEIR Applies a Legally Incorrect Interpretation of Feasibility*. CEQA requires application of "feasible" mitigation measures or project alternatives to mitigate significant impacts. Zero-emission container transport technologies could mitigate the significant NO2 impacts, but the DEIR states that they are not feasible, apparently because such technologies are not commercially available today. The DEIR repeatedly indicates that its authors reached this infeasibility conclusion based on the status of technology development today, not on what could feasibly be implemented in time to mitigate the project's impacts (e.g. by 2016, when project operation begins, or 2023, when the railyard is expected to reach capacity). For example, the DEIR states, "ZECMS has not yet reached the point of being feasible" (2-49); ZECMS "does not exist as a commercial product today" (2-50); and "ZECMS technologies are not yet viable" (2-51)(emphasis added). Indeed, the DEIR indicates that "it is very possible that zero-emission drayage trucks will become feasible," and that "zero emission container transport concepts, while not readily available at this time, are nonetheless potentially feasible future options for development by the ports . . ." (2-52).

These statements evidence a fundamentally incorrect interpretation of the law. CEQA does not require that a mitigation measure or alternative be capable of being implemented at the time the EIR is drafted. CEQA Guidelines section 15364 defines "feasible" for this purpose as, ". . . capable of being accomplished in a successful manner within a reasonable period of time . . . ." (emphasis added). As is described in Attachment B, there is ample evidence that zero-emission transport between the ports and near dock railyards is capable of being accomplished early in the life of the SCIG project, specifically, between 2016 and 2020. The project is expected to begin operation in 2016, reach full capacity in 2023, and to have a life of at least 30 years – the proposed lease term. Under these circumstances, with a project life – and associated health impacts -- measured in decades, an ability to deploy mitigation in the first four years of project life is certainly "within a reasonable period of time."

The Low Emission Drayage Trucks Proposed Project Condition is Not Sufficient. The zero-emission transport measure proposed above would replace measure PC-AQ-11: Low-Emission Drayage Trucks proposed in the DEIR. PC-AQ-11 is a proposed project condition (not a CEQA mitigation measure) that sets standards for diesel particulate matter emissions from trucks. It does not purport to limit NOx emissions (the cause of ambient NO_2), or other particulates. The measure thus does not necessarily address localized impacts from NO_2 and PM10, and is not a sufficient mitigation measure for the project's significant impacts.

Based on discussions with BNSF staff, the company anticipates complying with PC-AQ-11 using LNG trucks. The DEIR does not contain any evidence that such trucks would eliminate the project's significant NO_2 and PM impacts, and AQMD technical staff does not expect they would. Ambient NO_2 concentrations result from NOx emissions. NOx and PM emissions from LNG vehicles are substantially higher than emissions from zero-emission vehicles such as electric trucks. Given the substantial NO2 concentrations predicted in the DEIR, there is a need under CEQA to include the cleanest feasible vehicles and engines. The DEIR does not, however, provide any specific measures to mitigate NO2 impacts. Based on information in the DEIR, including the substantial exceedance of applicable ambient thresholds, simply establishing diesel particulate matter standard for combustion equipment does not provide emission reductions to fully mitigate NO_2 impacts. Even the cleanest combustion engine technology will have associated local NOx emissions impacts substantially above zero-emission technologies. Zero-emissions technologies thus must be included as mitigation measures for significant NO_2 and PM impacts. The deployment of zero-emissions technologies will also provide additional co-benefits in terms of additional reduction in diesel fine particulates and cancer risk. The DEIR considers zero-emission technologies as a potential mitigation measure for the project's ambient air quality impacts, but rejects them as infeasible (3.2-79). As is described elsewhere in this comment letter, this conclusion regarding infeasibility is incorrect and based on an erroneous interpretation of CEQA.

The Lead Agency Can Require Zero Emission Technologies. PC-AQ-11 demonstrates the Lead Agency's ability to require use of a trucks meeting a specific performance standard. This ability has also been amply demonstrated through the ports' successful implementation of the Clean Truck Program (see *2010 Clean Air Action Plan Update*), which progressively banned relatively old trucks from port properties. The same principle may be used to allow only zero-emission trucks over time.

Tier 4 Line-Haul Locomotives

PC AQ-12 specifies that as part of the SCIG lease agreement between LAHD and BNSF, a permit condition requiring implementation of measure RL-3 in the 2010 CAAP will be included. PC AQ-12 needs to be revised to be consistent with the goal of RL-3 to achieve 95% Tier 4 locomotives entering port property by 2020, and to apply all feasible mitigation of significant impacts. Thus, line-haul locomotives must be required to meet the following condition:

- **By 2018, at least 25% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.**

- **By 2020, at least 95% of BNSF line-haul locomotives entering SCIG and other port properties shall meet U.S. EPA Tier 4 emission standards.**

Tier 4 locomotive emission standards will reduce NOx and PM10 emissions and will further mitigate the significant localized impacts of NO_2 and PM10 caused by the project. The proposed requirement in PC AQ-12 for 50% Tier 4 and 40% Tier 3 by 2023 is not sufficient given the severity of localized NO2 and PM10 impacts. In addition, PC AQ-12 further weakens RL-3 by allowing locomotive emission reductions that would occur under RL-3 to be achieved on an equivalent basis anywhere in the Basin. This equivalency feature is not necessary to assure feasibility, and is contrary to the intent of RL-3 which sought emission reductions in or near port properties in order to reduce local exposures of harmful pollutants from locomotive activities. Therefore, the lead agency needs to include the 95% requirement under RL-3 in permit condition PC AQ-12, as well as requiring emission reductions to take place at or near port property by applying the measure to locomotives entering SCIG and other port properties – as set forth in the CAAP.

This measure is feasible. The ports have authority as "market participants" to establish environmental conditions in leases that would otherwise be preempted if they were acting as a regulator (*American Trucking Association v. City of Los Angeles*, 2011 U.S. App. LEXIS 22086 (October 31, 2011). The railroads have demonstrated an ability to accelerate fleet turnover in the South Coast Air Basin to locomotives meeting the latest EPA "Tier" of emissions standards for new locomotives. They are doing this now to comply with a 1998 Memorandum of Understanding between the Class 1 railroads and the California Air Resources Board. That MOU required the railroads to achieve a fleet average locomotive emission rate equal to the EPA Tier 2 standards that apply to locomotives initially sold in 2005. This fleet average was to be achieved by 2010 – just five years after Tier 2 locomotives initially became available under the EPA rule. A similar timeframe exists between 2015, when (under EPA rules adopted in 2008) new locomotives must meet Tier 4 standards, and 2020, the target date in CAAP RL-3 for 95% Tier 4 locomotives. That CAAP goal was supported not only by the ports, but also by the California Air Resources Board (which executed the 1998 MOU) and SCAQMD.

We expect that the railroad or lead agency may make a number of arguments against the 95% target. They may argue that sale of Tier 4 locomotives is several years away and their cost is not yet known. However, the railroads committed to accelerating Tier 2 locomotives in 1998 -- seven years prior to their development and sale. In addition, in determining feasibility of this measure, the port should consider the facts that (1) the railroads commonly purchase new locomotives for reasons unrelated to the environment, and, for such locomotives, the only real cost of this measure is to route them to Southern California – something the railroads are doing now with Tier 2 locomotives, and (2) the railroads have recently reported their highest annual profits in history (in the billions of dollars for each company), thus undermining any argument that acquiring additional Tier 4 locomotives would be economically infeasible.

The railroad may argue that Tier 4 locomotives may not be available. While Tier 4 locomotives are not yet available, Tier 4 emission standard are adopted are required under federal regulation. In establishing the Tier 4 locomotive emission standards, the U.S. EPA recognized that emissions from locomotive diesel exhaust was a challenging problem. However, U.S. EPA

believed it would be addressed feasibly and effectively through a combination of engine-out emission reduction technologies and high-efficiency catalytic aftertreatment technologies. EPA based this assessment on the successful development of these aftertreatment technologies for highway and nonroad diesel applications which had advanced rapidly in recent years, so that new engines can achieve substantial emission reductions in PM and NOX (in excess of 90 and 80 percent, respectively). With the lead time available and the assurance of Ultra low sulfur diesel fuel for the locomotives beginning in 2012, U.S. EPA was confident the application of advanced technology to locomotives diesel engines would proceed at a reasonable rate of progress and would result in systems capable of achieving the new standards on time.[1] Compliance with Tier 4 standards for model year 2015 and later locomotives is required by federal law

The railroad may also argue that the 1998 Tier 2 MOU allowed certain credits, such as for locomotives achieving greater emission reductions than Tier 2, and that such credits would be difficult to create now due to the lower emission levels required by Tier 4. However, even if this is a reason to deviate from the CAAP's 95% by 2020 goal, either in year or percentage required – and we do not believe it is (due to the considerable resources of the railroad), the EIR includes no analysis to determine what level of Tier 4 penetration less than the 95% goal previously supported by the ports, CARB and AQMD would be the maximum feasible. That maximum feasible level clearly is greater than the 50% by 2023 included in the EIR. 2023 is eight years after Tier 4 must under federal law be available. It is our understanding that BNSF has already achieved a greater than 50% level of penetration of Tier 2 locomotives (without counting any credits), and did so in less than eight years after Tier 2 first became available. In sum, there is no support for a conclusion that the EIR includes all feasible mitigation.

Evaluation and Demonstration of Zero-Emission Line-Haul Locomotives.
Emissions from line-haul locomotives associated with SCIG will contribute to significant project impacts identified in the DEIR. They also will contribute to cumulative impacts which, if the proper baseline is utilized (see Attachments C and D. Zero-emission locomotive technologies will assist in mitigating these impacts. They will also assist the ports in attaining San Pedro Bay Standards, which will require greater emissions and health risk reductions than will be achieved by current regulatory and CAAP standards (see 2010 CAAP Update, Page 20). Finally, zero-emission rail technologies will also be important for the region in attaining federal ozone air quality standards. Attainment will require broad deployment of zero-emission technologies for transportation.[7]

[1] Federal Register Vol. 73, No. 126, Monday, June 30, 2008 Rules and Regulations.

[7] The South Coast Air Basin has made substantial progress in reducing pollution, but still has the worst air quality in the nation, with substantial health impacts. SCAQMD air quality computer modeling shows that, to attain federal health-based ambient air quality standards for ozone, the region will need to reduce emissions of nitrogen oxides by approximately two-thirds by 2023, and by about three quarters by approximately 2030. These needed reductions are over and above the emission reductions that will be achieved by all adopted rules and programs. Mobile sources create 90% of NOx emissions. Trucks are the single largest source category, and locomotives are among the top NOx contributors. Fleet turnover to newer, lower emitting units will not be sufficient to attain federal air quality standards. Broad deployment of zero emission technologies such as electric power for transportation will be needed.

Electrified rail deriving power from overhead catenary wires or third rails is a strategy currently in use around the world for both freight and passenger service. Applying current electric locomotive technology is one potential means of achieving zero-emission rail. Issues that need to be resolved include funding the capital costs of electrified locomotives and infrastructure, sizing of locomotives to U.S. freight trains, and operational issues such as transitioning from electrified track in the region to track outside of the region that does not have electric power. Some potential new technologies could avoid the need for catenary or third rail infrastructure, or switching locomotive power at the edge of the region. Examples of such technologies include hybrid-electric locomotives with all electric range, dual-mode freight locomotives, battery tender cars to power traditional locomotives, and linear synchronous motors to propel trains.

Due to the air pollutant impacts of the SCIG project, the project must include feasible measures to move the ports toward zero locomotive emissions. These measures can and should include, at a minimum, the following two-pronged approach:

1. Evaluation and Demonstration of Existing Zero-Emission Line-Haul Locomotive Technologies

The Port of LA will evaluate, in conjunction with SCAG, EPA, CARB and SCAQMD, the practicability of electrified rail powered from overhead catenary wires or third rails. Such evaluation will include consultation with locomotive manufacturers to assess cost and operational feasibility of using traditional electric locomotives to serve SCIG. The cost feasibility shall include potential funding opportunities including but not limited to public-private partnerships, private funding by the railroad (e.g. pursuant to *Cooperative Actions by Project Applicant,* below), and public funding. These evaluations shall be completed by mid 2013 and shall be reported in writing and described to the Harbor Commission in a public meeting.

2. Technology Demonstration of New Zero-Emission Line-Haul Locomotive Technologies

The Port of LA will co-fund with SCAQMD and other parties, demonstrations of two or more advanced zero-emission line-haul rail technologies. These shall include but are limited to: hybrid-electric locomotive with all electric range, dual-mode locomotive, battery tender cars, fuel cell locomotives or tender cars, and linear synchronous motor technology. The technology demonstration shall commence no later than 2013. The Port of LA will also, in conjunction with SCAG, EPA, CARB, and SCAQMD, jointly seek funding through public-private partnerships, private funding by the railroad (e.g. pursuant to *Cooperative Actions by Project Applicant,* below), and public funding, for a large-scale demonstration in operational service.

Cooperative Actions by Project Applicant

In order to assure implementation of the above measures, the lead agency must adopt project approval conditions requiring the applicant to cooperate in the actions described above. Specifically, the port needs to adopt the following:

> **The Port of LA will adopt SCIG project approval conditions requiring the applicant to cooperate in actions to implement zero-emission transport between the ports and SCIG, and in the evaluation and demonstration of existing and new zero-emission line-haul locomotive technologies, as described above. Specifically, such conditions will require the applicant to (1) provide information needed for Port of LA to conduct the above-described evaluations, (2) cooperate in any technology demonstrations, and (3) take any other actions, including co-funding, the Port of LA determines necessary to implement this alternative, subject to reasonable limits established by the Port of LA in the project approval.**

The DEIR Does Not Include a Range of Reasonable Alternatives as Required by CEQA

Zero Emission Alternative. CEQA requires that an EIR include a range of reasonable alternatives[8] "selected and discussed in a manner to foster meaningful public participation and informed decision making,"[9] Currently, the DEIR includes only one alternative (other than "no project"): a reduced capacity alternative. Under the no project alternative, the impact analysis assumes that the proposed project would not be built, while the reduced capacity alternative assumes that all physical features of the proposed project will be built, but that the capacity would be restricted to 1.85 million TEUs (as compared to 2.8 million for the proposed project). No alternatives that would reduce environmental impacts while maintaining the proposed capacity are included.

There are two major problems with this. First, including just one real alternative is not a reasonable "*range*." Second, this problem is made worse by the fact that the reduced capacity alternative would scale back the ability of the project to meet its objectives. This indicates that the alternative is less desirable to the lead agency, is thus less likely to be approved, and that a "reasonable" range of alternatives therefore has not been presented. There is no alternative directly focused on mitigating a key impact of the project – air quality. A zero-emission

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[8] Under state law, an EIR "shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." (CEQA Guidelines §15126.6(a)). Alternatives should not be rejected merely because they "would impede to some degree the attainment of the project objectives, or would be more costly." (CEQA Guidelines §15126.6(b)) The range of alternatives required in an EIR is governed by a "rule of reason." (CEQA Guidelines §15126.6(f)).

[9] State CEQA Guidelines § 15126.6 (f) states: The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision making.

alternative could have been crafted for this purpose that would be feasible to implement during the life of the railyard, meet all stated project objectives, and reduce environmental impacts.

Alternative Location. Part of the lack reasonable range of alternatives is the lack of a project alternative incorporating an alternate site for the project, and the insufficiency of analysis under CEQA of potential alternative sites. In Chapter 2 of the DEIR, the lead agency discusses alternative locations inside and outside the port boundaries for the proposed project. Siting the proposed SCIG project inside port boundaries would mitigate the proposed project's significant localized impacts to residents and sensitive receptors such as schools. Several proposed sites with port boundaries are discussed. These include Pier S, POLB Eighth Street/Pier B, LAXT, Berth 200, and the Terminal Island Joint Intermodal Terminal (TIJIT). The lead agency provides relatively conclusory explanations for why each one of these sites should be eliminated from consideration. This discussion cites and relies upon the Parsons Transportation Group, 2004 study *San Pedro Bay Ports Rail Market Study Part 2, and their 2010 Rail Simulation Modeling Update.* However, the public does not have access to these studies to verify the conclusions reached by the lead agency in the DEIR. Although the studies are listed in the Reference Section accompanying the DEIR, one is not available and the other is listed as Appendix G2. Appendix G2 is only 4 pages long and there is no information related to the inadequacies or potential rail delays associated with alternate sites for intermodal yards within port boundaries. This is not sufficient information disclosure to satisfy CEQA. The lead agency must provide complete studies referenced in Section 2.5.2 in order for AQMD and the public to understand and assess the DEIR's conclusions.

Excess Capacity

The SCIG project would, in conjunction with the proposed expansion of the adjacent ICTF railyard, exceed the ports' own projections for needed near-dock railyard capacity through 2035. In Appendix G2 of the DEIR, the lead agency discusses the projected cargo demand forecast and the need for an additional near dock intermodal rail yard to handle future demand. The lead agency states, "The demand for Direct Intermodal capacity exceeds the capacity of planned on-dock facilities in year 2020 and that latent demand grows to 2.68 million TEU per year by 2035." Based on the projected demand and forecasted near- and on-dock capacity, there appears to be significant overbuilt capacity planned for near dock rail yards that will serve the San Pedro Bay ports. Table 2 below summarizes the Projected Intermodal Need at the SPB Ports and the Near Dock capacity with the existing ICTF and the Proposed SCIG facilities.

Table 2

Rail Yard Capacity	**Million TEU's**
Projected Intermodal Need at SPB Ports	2.68
Current ICTF capacity	1.40
Proposed SCIG	2.80
Total Near Dock	4.20
Potential overbuilt capacity (Projected Intermodal Need – Total Near Dock)	1.52

As shown in Table 2 above, the Projected Intermodal Need is 2.68 million TEUs, this assumes all planned on-dock rail yard development occurs. With the current ICTF capacity of 1.4 million

TEUs and the Proposed SCIG capacity of 2.8 million TEUs, the Proposed SCIG facility will exceed the Projected Intermodal Need by 1.52 million TEUs. The lead agency must specifically evaluate whether the amount of near-dock railyard capacity *actually needed* could be built at sites within the ports, which is farther from residents and schools than the proposed project and future ICTF expansion. At a minimum, the lead agency should consider Alternative 2, Reduced Capacity Alternative, as the preferred alternative due to the excess demand being built into the proposed project. Lastly, the lead agency should provide assurance approval of the Proposed SCIG facility would not result in any reduction in committed on-dock improvements.

NO_2 and PM_{10} Impacts

The NO_2 and PM10 localized analysis does not provide a complete picture of the potential severity of NO_2 or PM_{10} impacts to the community. For example, because the area of impact has such a wide geographic extent, it is not clear if most of the impacted community will experience NO_2 concentrations five times higher than federal standards, or if most impacted areas will be exposed to concentrations much closer to (though still over) the standards. AQMD staff recommends that the lead agency revise the criteria pollutant maps to include contours showing how the NO_2 and PM concentrations vary within the areas significantly impacted.

NO_2 Sources

Based on data presented Table C.2.5-15 (reprinted in Table 3 below), the primary source of NO_2 emissions at the point of maximum impact are the Tenant Onsite Trucks. The primary source of emissions at the point of maximum impact for PM_{10} is the SCIG Onsite trucking activity. However, this information cannot be used to determine if these same sources are driving the significant impacts for all areas. For example, because the extent of NO_2 impacts covers such a wide geographic extent, it would seem that the 1,995,000 SCIG drayage trucks in 2023 are likely to be more important than the 91,456 Tenant Onsite Trucks in areas far removed from Tenant Onsite Truck activity.

Table 3

Emission Source	NO_2 1-hour	PM_{10} 24-hour	PM_{10} Annual
Tenant Onsite Trucks	50.5%	0.4%	<0.1%
Tenant CHE	38.4%	0.1%	<0.1%
SCIG Onsite Trucks	4.1%	95.1%	97.3%
Tenant Offsite Trucks	1.9%	0.2%	<0.1%
SCIG Onsite Locomotives	1.8%	0.2%	<0.1%
SCIG Offsite Trucks	2.0%	2.8%	1.9%
SCIG Offsite Locomotives	0.6%	<0.1%	<0.1%
All Other Sources	0.7%	1.1%	0.3%

In order to address significant localized impacts, mitigation measures should be focused on the most important source locally. Because there isn't enough information presented to determine which sources are most important for different parts of the impacted community, it is not clear where mitigation efforts should be focused. AQMD staff recommends that additional figures be presented similar to that found in the CAAP (Figure 5-5 of the HRA for the 2010 CAAP update)

where pie charts depicting source contribution are shown on a map for representative locations alongside risk values.

NO_2 Emission Rates

The footnotes to table C1.2-TEN-2 *Emission Factors for Tenant Port Drayage Trucks* state:

- Emission factors were derived from EMFAC2007 v2.3 with modified fleet age distribution based on Port-wide inventory (Starcrest, 2009).

- Emission factors incorporated the SPBP Clean Truck Program and California Statewide Bus and Truck Regulation.

These assumptions do not appear to reflect the actual future emission factors for trucks operating at tenant properties. For example, Cal Cartage currently is served by a fleet of approximately 350 LNG heavy duty trucks. AQMD staff recommends that lead agency update these emission factors for these tenant trucks and present the results of these reductions on predicted pollutant concentrations in the community.

Further, given the significant difference in the number of trucks serving SCIG in the peak year of 2023 (1,995,000) compared to the tenant sites (91,456), it is surprising that the emission rates were found to be the same at 14 pounds per hour for the NOx 1-hour analysis (Table C2.2-4). AQMD staff requests that the lead agency explain why this rate is the same for these two sources.

Mitigation Measures

MM AQ-1: Fleet Modernization for Construction Equipment

MM AQ-1 requires that from January 1, 2012, to December 31, 2014, all off-road diesel–powered construction equipment greater than 50 horsepower meet Tier 3 non-road emission standards and be equipped with CARB certified Level 3 diesel emission control system (DECS). Beginning in January 1, 2015, the mitigation measure requires all off-road diesel-powered construction equipment greater than 50 horsepower meet Tier 4 non-road emission standards with CARB certified Level 3 DECS. This mitigation measure does not represent the cleanest technology available since Tier 3 certified construction equipment has been available since 2006, and construction equipment meeting Tier 4 non-road emission standards became available beginning 2011. MM AQ-1 should be revised to require all construction equipment to meet the cleanest off-road engine emission standard available, and be equipped with Level 3 CARB verified DECS.

MM AQ-2: Fleet Modernization for On-road Trucks (used during construction)

MM AQ-2 requires that all on-road heavy-duty diesel trucks used during construction shall comply with EPA 2007 on-road PM and NOx emission standards. MM AQ-2 specifies exceptions from this requirement for import haulers and earth movers. SCAQMD sees no reason for these exceptions. It has been five years since the 2007 on-road standards went into effect and even with the known slow turn-over of these trucks, it is very likely that trucks used for import haulers and earth movers, meeting the 2007 on-road standards are in service. SCAQMD staff urges the lead agency to remove these exceptions and require as part of this mitigation measure, use of the cleanest available trucks, during construction. Specifically, trucks used during

construction should operate on engines with the lowest certified NOx emissions levels, and if the lowest available does not meet the EPA 2007 on-road PM emission standards, then the lead agency shall require all trucks be equipped with CARB certified Level 3 DECS. It is also recommended that these requirements apply during circumstances where a piece of compliant equipment becomes available during the timeframe of construction.

Baseline Emission Quantification Methodology

One of the principal concerns with the DEIR is the establishment of the CEQA baseline. The lead agency evaluates impacts of the proposed project by comparing future emissions with the proposed project, to emissions levels back in 2005. This analysis does not disclose the impacts of the proposed project because it does not compare future emissions with the project, to future emissions without the proposed project. For some impacts, such as cancer risk, the lead agency concludes that the proposed project will have no impacts, even though the project will cause greater health risks in some locations than would occur without the project. This conclusion is based on the determination that the DEIR present the baseline conditions as the operational activities that occurred and conditions as they existed, in 2005.

This approach is unrealistic and runs counter to CEQA guidelines. CEQA Guidelines section 15064 requires the DEIR to analyze the impacts of the project and determine "whether a project may have a significant effect…" Section 15064(d) further says "In evaluating the significance of the environmental effect of a project, the lead agency shall consider direct physical changes in the environment which may be caused by the project…" The analysis in the DEIR violates this guideline by not focusing on changes *caused by the proposed project* and improperly taking credit for changes that are not related to the proposed project. This concept is discussed in detail in our initial letter commenting on the SCIG DEIR submitted to the lead agency on November 30, 2011 (Attachment C and D).

Inclusion of Hobart Drayage Trucks and Locomotives in CEQA Baseline

Under CEQA Guidelines Section 15125, the lead agency is required to document the environmental setting at the time the Notice of Preparation (NOP) is released. In addition, the guidelines require that "the environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant." The CEQA baseline in the DEIR includes all activities of the existing tenants located at the project site as it existed in 2005 (CEQA baseline year). There were nine tenants operating at the site in 2005 including several trucking businesses such as California Cartage and Three Rivers Trucking. In addition to the existing tenant operations, the analysis includes the drayage truck trips from the port terminals to and from the Hobart Railyard in the city Commerce, as well as the resulting locomotive operations necessary to transport containers into or out of the Basin. According to the DEIR, these Hobart-related trips were included under the assumption that the drayage truck trips and the resulting locomotive operations would be shifted to the SCIG facility once the proposed project was completed.

The estimates for the number of truck trips, train counts, and resulting emission contribution to the overall CEQA baseline is shown in the following table. Table 4 shows that the resulting emissions contribution from the Hobart-related truck and train trips to the overall CEQA baseline is significant, and is the majority contributor for all but CO.

Table 4

Pollutant (lbs/day)	Truck Trips	Train Trips	Total of Truck and Train Trips	Overall Baseline Emissions	Percent Contribution
Counts per Year	814,000	1,800			
VOC	280.88	93.46	374.34	590.00	63.4%
CO	1,306.22	752.33	2,058.55	4,935.00	41.7%
NOx	4,467.86	3,341.63	7,809.49	10,205.00	76.5%
SOx	31.70	98.01	129.71	144.00	90.1%
PM10	394.57	48.21	442.78	747.00	59.3%
PM2.5	192.15	44.35	236.50	345.00	68.6%

Source: Tables C1.2 BL-1 through C1.2 BL-8, and C1.2-BL-29

Including the Hobart-related drayage truck trips and train operations inflates the CEQA baseline so that the incremental change with the proposed project is lower than it would otherwise be if only the emissions from the existing tenants were included in the baseline. The proposed project represents a new facility meant to accommodate the future growth in international containers, and though one of its benefits is to redirect container traffic to the downtown railyards (e.g., Hobart Railyard), it is possible – even probable -- that the lost container traffic to the Hobart Railyard due to the new SCIG facility, will be made up by local container traffic such as transloaded cargo. If the lead agency insists on including drayage truck trips and train operations to and from the Hobart Railyard in the CEQA baseline, it must also include the future truck trips and train operations to and from Hobart allowed by the capacity at Hobart railyard that is freed up because of construction of SCIG.

In short, much of the DEIR (including its heart: impacts and needed mitigations) is based on a fundamental but unsubstantiated assumption that constructing SCIG will eliminate truck trips to Hobart. But nothing in the SCIG project approval would limit capacity at Hobart, and BNSF has stated no intention to reduce operations there. There is a direct tie between building SCIG and opening up capacity at Hobart, and the EIR must analyze how much of that capacity will be filled, e.g. by domestic freight. Only then can a valid assessment of truck and locomotive traffic and emissions impacts of SCIG be developed. The EIR is fundamentally deficient under CEQA without a thorough analysis of this issue.

Table 3.2-25 Inconsistency

Table 3.2-25 of the DEIR shows the peak operational emissions of the proposed project without mitigation. The emissions impact is also presented by determining the difference between the proposed project emissions in a given year with the CEQA baseline emissions. At the end of the table there is a footnote (footnote "c") that states the CEQA baseline emissions do not include the emissions from drayage trucks and locomotive emissions to and from the BNSF Hobart Railyard for years 2013 through 2015. The footnote is not included for years 2016 and beyond. In reviewing this table, the SCAQMD staff has noted that the values for the CEQA baseline emissions are the same for all years. This would seem to indicate that the emissions from drayage trucks and locomotive emissions to and from the BNSF Hobart Railyard were included for all years, making the footnote incorrect. The SCAQMD staff requests: (1) justification on the

use of two different CEQA baselines; and (2) clarification on how the emissions from drayage trucks and locomotive emissions to and from the BNSF Hobart Railyard were factored into the CEQA baseline for the various years in Table 3.2-25. The SCAQMD recommends that the Final EIR peak operational emissions table should reflect the true values for both the CEQA baseline and the proposed project impacts.

Inclusion of Existing SCE Tenants Cal Cartage and Three Rivers Trucking in Baseline
The lead agency has included the activities and associated emissions from existing tenants in the baseline. The operational emissions from the relocated tenants are also included in the future emissions for the proposed project. What is not clear is whether the portion of activities from tenants Cal Cartage and Three Rivers Trucking that remain on the SCE leased property are included in the future projected emissions for the proposed project. The lead agency should clarify whether the operations of the SCE-based tenants are included in future project emissions. If they are not part of the proposed project emissions, then operation emissions should be removed from the baseline emissions.

Construction Emissions Quantification Methodology
Crane Delivery
In order to calculate the emissions from the delivery of rail mounted gantry cranes (RMG) to the proposed project site, the lead agency assumes that one ship is capable of delivering 20 RMGs (pg. 3.2-27). It is our understanding that crane manufacturers have in the past transported two cranes per ship, which would result in at least 10 ship calls during the course of the construction phases for the proposed project. Even making allowances for the RMGs being smaller than those proposed for the proposed project, the assumption of one ship call for 20 RMGs is extremely low. As a result of this assumption, construction emissions are underestimated. This is especially significant since the emissions from transporting RMGs make up such a large portion of the construction emissions (up to 70% of NOx emissions in 2015).

Another concern is that the cargo ships emission calculation lacks sufficient detail for SCAQMD staff to understand how the emissions are calculated. It appears that the DEIR utilizes an average emission rate in pounds of emissions per ship call based on the results of the 2007 Port of Los Angeles Emission Inventory. However, a more accurate methodology would break out each cargo ship movement operation such as transit, maneuvering, and hotelling. In that way the reader could verify that reasonable assumptions were used in the analysis. We are also unclear as to whether the emissions from tugboats used to help maneuver ships to dockside for crane unloading were included in the analysis. In addition, the DEIR states that the cranes would be delivered by general cargo ships (pg. 3.2-27), while Table C1.1-64 lists the emission rates per call as being from container ships. The emission rates for these two ship types are quite different and clarification is needed. The lead agency should include more detailed emission calculations to fully document all emission sources of crane delivery.

Construction Shifts
The description in the DEIR of the number of construction shifts and resulting construction hours per day is inconsistent. For instance, the number of construction shifts per day is described as being "normally occurring in two shifts per day" (pg. 2-25), while in two other sections of the DEIR, construction activity is described as being 10 hours per day (pgs. C2-2, C1.1-9, and C1.1-

10). Since this has an impact on construction emissions, the SCAQMD staff recommends that additional clarification be provided to clearly state what assumptions were used in analysis for construction shifts and hours.

Operation Emissions Quantification Methodology

Locomotive Emission Factors

In order to calculate the emission from locomotives, the lead agency estimated train emissions using emission factors based on the 1998 Fleet Average Agreement between CARB and the Class I railroads for fleet forecasts through 2019, and the EPA national locomotive fleet forecast for all years after 2019 (pg.3.2-32). No references on where the actual emission factors could be located in the DEIR were provided. However, the SCAQMD staff located the emission factors in Tables C1.2-20 through C1.2-22 of Appendix C1.2. It is unclear how these emission factors relate to both the 1998 Fleet Average Agreement between CARB and the Class I railroads, and the EPA national locomotive fleet forecast. An explanation should be provided on how the emission factors in Tables C1.2-20 through C1.2-22 were estimated and whether they are based on projected in-use emission rates or emission standards. Specifically, in order for the reader to determine if the emission factors are reasonable, the lead agency needs to provide in the DEIR a methodology on the derivation (with appropriate references) of the emission factors and how they were converted from a grams per brake-horsepower rate to a grams per hour rate.

Switcher Locomotives

The DEIR describes the maximum operating hours per day of switcher locomotives as being two switchers operating for a total of 20 minutes per day (pg. 3.2-34). This underestimates the switcher activity and is unrealistic considering the numbers of trains entering and exiting the proposed SCIG facility at buildout (i.e., 8 trains per day). It is our understanding that, switcher operating hours at a typical railyard with similar size to the proposed project is much higher. For instance, the operating hours for switchers at BNSF's Los Angeles - Hobart Railyard[10] is on the order of 16.5 hours per day. Considering the obvious impacts on emissions, the lead agency should provide substantiation for the low daily operating hours estimate for switchers.

Train Counts

The lead agency estimates the proposed project will process 1.5 million lifts per year at its maximum operating capacity in 2023. The Notice of Preparation (NOP) for the proposed modernization and expansion project for the Intermodal Container Transfer Facility (ITCF) released in January 2009, indicated that the ICTF will also process 1.5 million lifts per year at its maximum operating capacity in 2023[11]. For the proposed project, the lead agency estimates that the number of annual rail round-trips will be 2,880 at full capacity, while the annual rail round-trips for the proposed ICTF will grow from the baseline activity of 2,373 to 4,745 at capacity[5]. Table 5 is provided below summarizing these parameters.

[10] Los Angeles - Hobart Railyard TAC Emissions Inventory, December 2006, http://www.arb.ca.gov/railyard/hra/env_hob_ei122006.pdf

[11] Notice of Preparation and Initial Study, Intermodal Container Transfer Facility Modernization and Expansion Project, ICTF Joint Powers Authority, January 2009.

Table 5

	SCIG[1]	ICTF[2]
Container Lifts (Annual)[3]	1.5 million	1.5 million
Rail Round Trips (Annual)[3]	2,880	4,745

1. DEIR, Table 2-2
2. Notice of Preparation and Initial Study, Intermodal Container Transfer Facility Modernization and Expansion Project, ICTF Joint Powers Authority, January 2009.
3. 2023

It is unclear why the estimate for annual rail round-trips at capacity for the proposed project is so much lower than the estimate reported in the NOP for the ICTF proposed project. Intuitively, we would expect the train counts to be similar since the number of container lifts was equivalent. The SCAQMD staff requests that an explanation be provided on how the train counts were estimated and why the counts are so different than the counts presented in the NOP for the ICTF proposed project.

Locomotive Fueling and Servicing

The DEIR estimates the emissions from the on-site fueling of locomotives at the proposed SCIG facility. Such on-site refueling is expected to be conducted using Direct to Locomotive (DTL) fueling. The assumptions for these DTL fueling events are shown in Table C1.2-44. The SCAQMD believes that the activity estimates provided in this table are too low for the projected number of trains entering and exiting the SCIG facility. The SCAQMD staff has provided Table 6 below to present the estimation of the amount of dispensed fuel that is underestimated, given the number of daily trains.

Table 6

	2016	2023
Train visits per day[1]	6	8
Number of Locomotives per year[2]	8640	11520
Average Fuel dispensed per DTL Event (gallons/DTL Event)[3]	1200	1200
Total Fuel Required per Year (gallons)	10,368,000	13,824,000
Annual Fueling Truck Trips[4]	683	910
Average Capacity of DTL Fuel Truck (gallons)	8,000	8,000
Total Possible Fuel Dispensed (gallons)	5,464,000	7,280,000
Underestimation of Dispensed Fuel	4,904,000	6,544,000

1. Table C1.2-6
2. Based on 360 days per year and 4 locomotives per train consist
3. (http://www.arb.ca.gov/railyard/hra/env_barstow_eirpt.pdf, Chapter 6.2. pg. 6-1 and Table 4-3, pg.4-3); (http://www.arb.ca.gov/railyard/hra/env_sb_eirpt.pdf, Chapter 6.2, pg 6-5)
4. Table C1.2-44

Table 6 shows that in 2016, 683 tanker truck visits will be required to refuel the estimated 2,160 train round trips per year (based on 6 train round trips per day). This increases to 910 tanker truck visits in 2023 and later years, when there will be 2,880 train round trips per year (based on 8 train round trips per day). Using conservative assumptions of four locomotives per train consist, 1,200 gallons per fuel dispensed per DTL fueling for each locomotive, and a 8,000 gallon capacity of fuel per DTL fuel truck, the SCAQMD staff estimated that there would be an underestimate of fuel dispensed of approximately 4.9 million and 6.5 million gallons of fuel needed in 2016 and 2023, respectively. Therefore, the estimated number of DTL tanker truck visits used in the analysis for the proposed project is physically impossible due to the typical size of the fueling tankers and the number of train visits per day. There will necessarily be nearly twice as many truck trips to deliver the required 10,368,000 gallons (in 2016) compared to the capacity of the 683 truck trips assumed in the DEIR. Consequently, emissions from truck trips for fueling are substantially underestimated. The SCAQMD staff recommends that the assumptions used for the number of DTL tanker truck visits be reevaluated or the lead agency should provide additional evidence that can substantiate the projections.

Another area of concern is the amount of on-site truck idling time assumed for each DTL tanker truck visit. In table C1.2-44, the lead agency assumes that each DTL tanker truck will idle for 0.17 hours per trip (10.2 minutes). This idling time is significantly lower than the idling times assumed during DTL refueling at the BNSF railyards[12] in San Bernardino, Barstow, and San Diego which averaged from 60 to 70 minutes per visit. The assumptions used for DTL tanker truck idling should be reevaluated or the lead agency should provide additional evidence that can substantiate the projections.

The DEIR does not include any assumptions for locomotive idling during fueling or other service events. Based on investigations by the SCAQMD staff, locomotive idling times during DTL fueling and service events can be up to 150 minutes per event. Since this omission can have a significant impact on emissions, the assumptions for locomotive idling during DTL fueling and service events should be included in the analysis or the lead agency should provide additional evidence that can substantiate why they should not be part of the analysis.

Drayage Truck Trips

The lead agency states in the DEIR Section 3.10.3.3.2 that the proposed project would operate with fewer drayage trucks per intermodal lift as compared to the existing Hobart Railyard facility (pg. 3.10-25). As a result, the proposed project would operate with fewer bobtails (tractors with no chassis) than the baseline operation (i.e., Hobart Railyard). In Table 3.10-13, the lead agency provides the drayage truck trips per intermodal lift ratios for both the baseline and proposed project scenarios. Table 3.10-13 is repeated below for ease of discussion (Table 7). As shown in the table, the bobtail ratio goes down from 0.862 drayage truck trips per intermodal lift for the baseline scenario to 0.100 drayage truck trips per intermodal lift for the proposed project. The project description indicates that there would be a "small amount" of chassis storage. Most lifts will be "live lifts" where the container is lifted from the chassis and the chassis leaves the

[12] (http://www.arb.ca.gov/railyard/hra/env_sb_eirpt.pdf, Chapter 6.2, pg 6-5); http://www.arb.ca.gov/railyard/hra/env_barstow_eirpt.pdf, Chapter 6.2, pg 6-1); (http://www.arb.ca.gov/railyard/hra/env_sd_eirpt.pdf, Chapter 6.2, pg 6-1)

facility. Table 7 should show an increase in chassis movements since there are more "live lifts" than a traditional intermodal railyard which is reflected in the lower bobtail ratio.

Table 7

Trip Generation Conditions	In-Gate Load (Depart Port)	Out-Gate Load (Arrive Port)	Chassis (in and out)	Bobtails (in and out)	Total
Baseline Intermodal Facilities	0.610	0.390	0.220	0.862	2.082
Proposed Project	0.610	0.390	0.220	0.100	1.320

The SCAQMD staff is concerned that the ratios in Table 3.10-13 are inaccurate. Specifically, we would expect the drayage truck trips per intermodal ratio for chassis (trucks entering or leaving the facility with a chassis but no container) would increase as the bobtail ratio decreases as compared to the baseline scenario. On page 2-32 of the DEIR the lead agency states that "Trucks that had performed a live lift or delivered a container to a stacking area would in most cases be directed to a location in the container stacking area where another container would be loaded onto the chassis by an RMG for transport back to the port terminals." This means that the vast majority of drayage trucks will enter and leave the facility with a container. However, it is not clear how the ratio for bobtails in or out was determined for the proposed project when all other ratios remain the same for the proposed project (as compared to the baseline scenario). Therefore, the SCAQMD staff requests the lead agency to provide the assumptions on how the ratios in Table 3.10-13 were derived.

Change in Trip Generation

Table 3.10-23 (pg. 3.10-40) summarizes existing tenant trip generation under CEQA baseline conditions and the proposed project scenario, as well as the net change in peak hour trip generation at the Sepulveda driveways and relocation site entrances. The SCAQMD staff has discovered a subtraction error in the net change peak-hour trips for the Sepulveda driveways MD and PM values, assuming the values for the CEQA baseline and proposed project are correct. A table highlighting (Table 8) the error and what should be the correct net change is provided below. We request that the lead agency correct these values in the final DEIR or if different, explain how they were calculated, and if necessary re-evaluate the impacts.

Table 8

Entrance	Scenario	Tenant	AM			MD			PM		
			In	Out	Total	In	Out	Total	In	Out	Total
Sepulveda	CEQA Baseline	Total	215	135	350	90	95	185	110	165	275
	Proposed Project	Three Rivers	30	15	45	30	30	60	35	55	90
		Cal Cartage	50	20	70	30	30	60	35	35	70
		Total	80	35	115	60	60	120	70	90	160
	Net Change[1]		(135)	(100)	(235)	~~(165)~~ (30)	~~(170)~~ (35)	~~(335)~~ (65)	~~(160)~~ (40)	~~(255)~~ (75)	~~(415)~~ (115)

1. CEQA Baseline minus proposed project.

Construction Truck Trips

In evaluating the impacts under Impact TRANS-1 (pg. 3.10-41), the lead agency determined that there would be fewer than 30 peak-hour truck trips during construction operating hours (i.e., 7:00 A.M. to 7:00 P.M.). The SCAQMD was unable to locate supporting analysis to verify this value (including in Appendix G), but based on the reported truck round-trips this value seems low. The reported proposed project construction truck round trips were 330 round trips per day. The construction operating hours span twelve hours, so the average number of one-way truck trips would be 55 one-way trips (660 one-way trips divided by 12 hours). Therefore, a final peak-hour truck trip count of less than 30 trips could not occur if the average was 55 trips. The SCAQMD staff requests that the lead agency provide a clarification of this impact determination, and if necessary re-evaluate the impacts.

In addition to the above concern, the SCAQMD staff also would like to know how the threshold of 30 peak-hour truck trips relates to the thresholds discussed under Impact TRANS-1 (pg.3.10-37). The thresholds for this impact were supposed to be consistent with the thresholds for Impact TRANS-2, which used volume to capacity (V/C) ratios and relative level of service (LOS) values to determine significance. These thresholds are as follows:

- V/C ratio increase greater than or equal to 0.040 at any intersection if final level of service is C,
- V/C ratio increase greater than or equal to 0.020 at any intersection if final level of service is D, or
- V/C ratio increase greater than or equal to 0.010 at any intersection if final level of service is E or F.

No discussion of V/C ratios and relative LOS values are included in the impact determination section (pgs. 3.10-40 thru 3.10-41), so they are inconsistent. Therefore, the SCAQMD staff requests that the lead agency provide further clarification of this impact determination, and if necessary re-evaluate the impacts.

Locomotive Idling

On page 3.2-32 of the DEIR, the lead agency states "Locomotives entering the facility will shut down three of the four engines per locomotive consist." The lead agency further goes on to state

that "The remaining three engines are only restarted immediately prior to departure of trains from the facility." In addition, on-site idling of any single locomotive is also limited to 15 minutes due to each locomotive being equipped with the Automatic Engine Start Stop technology. These assumptions form the basis for calculating all SCIG related locomotive idling emissions in the DEIR.

The SCAQMD staff is concerned that on-site locomotive idling may be underestimated. It is also not clear what was the assumption for the average and peak idling time for line-haul locomotives at the facility. Idling would occur for locomotives preparing to both shut down and start up upon entering and leaving the facility, as well as for servicing and fueling. Based on investigations by the SCAQMD staff, locomotive idling times during DTL fueling and service events can be up to 150 minutes per event. The SCAQMD staff requests that the lead agency provide the assumption for the average and peak idling time for line-haul locomotives at the facility. It is also unclear where locomotive servicing will be occurring for the six to eight trains projected to arrive and depart the SCIG facility during operation years. The locomotive servicing location needs to be clarified. Finally, since the lead agency is basing their analysis on the assumption that three out four locomotives will shut down upon entering the facility, this requirement needs to be included as a permit condition to the proposed project. Otherwise, it is uncertain that the CEQA document accurately describes impacts from locomotive idling.

Existing and Relocated Tenants

The DEIR includes the baseline emissions for nine tenants operating at the site in 2005 including several trucking businesses such as California Cartage and Three Rivers Trucking. However, relocated tenant operations were estimated for only four of the nine existing tenants (pg. 32.-29). According to the lead agency "Other tenants are not considered whose leases would be non-renewed or terminated." The SCAQMD staff is concerned that excluding these other tenants out of the future emission analysis underestimates the impacts of the proposed project. These tenants are involved with port-related business and are likely to relocate to the surrounding area, so it is important to make an attempt to include them in the future analysis. The lead agency needs to provide a discussion of these other relocated tenants and perform significant analysis to include their future emissions in the impact section for air quality.

Health Risk Assessment (HRA)

HRA Locomotive Fleet Mix and Emission Factors

The quantification methodology for locomotive emissions is dependent upon the baseline and projected fleet mix of locomotives. The assumed fleet mix in turn determines the estimated emission rate used in the emissions calculations. According to Table C1.2-21, line-haul locomotive fleets for future years are based on projections from 2005 CARB Railroad Statewide Agreement through 2019, and the EPA Regulatory Impact Analysis for the federal 2008 locomotive rulemaking beyond 2019 (footnote 2, pg. C3-5). On page 3.2-32 the lead agency specifies that the fleet forecasts in the DEIR are based on the 1998 CARB Railroad Statewide Agreement and EPA Regulatory Impact Analysis for the federal 2008 locomotive rulemaking. This is an inconsistency, and the lead agency needs to provide an explanation on which source was used as the basis for the fleet mix projections.

In addition, the information provided is insufficient to determine the makeup of the fleet mix because only emission rates in grams per hour (g/hr) are provided which do not indicate the percentage makeup of the projected fleet by locomotive tier. The DEIR needs to include a description of how (including the actual yearly breakdown by locomotive tier) the fleet mix was derived and why two fleet mix projections were used.

In addition, the line-haul emission rates provided are presented in terms of grams per hour (g/hr) by notch rather than in the traditional standard-based metric of grams per brake-horsepower hour (g/bhp-hr). These units make it difficult to compare the emission rates used to calculate the baseline and proposed project emissions to the U.S. EPA locomotive emission standards. Accordingly, the lead agency needs to clarify the line-haul fleet mix make-up in percentages by emission tier (e.g., Tier 2, Tier 3…etc.). We also request that the line-haul emission rates be presented in terms of an overall composite emission factor in terms of g/bhp-hr, by pollutant for each milestone year.

Baseline Health Risk

It is unclear whether the HRA analysis includes the emissions from the drayage trucks going to and from the Hobart Railyard. In Appendix C3 – Health Risk Assessment for the Southern California Intermodal Gateway (SCIG) the lead agency indicates that the drayage trucks traveling between the baseline tenant sites and the Port terminals were modeled as part of the baseline analysis (pg. C3-3). Based on the list of truck routes provided it does not appear the baseline HRA modeling includes the drayage truck trips traveling to and from the Hobart Railyard. This section of the DEIR does not mention any reference to the drayage trucks going to and from the Hobart Railyard. However, in Table C3-2-2 there is a line item for toxic air contaminant emissions from Hobart trucks. According to the table, the 70-year average CEQA baseline value for Hobart trucks is 36,000 pounds per year. We recommend the lead agency clarify whether Hobart-related drayage trucks are included in the CEQA baseline HRA analysis.

Emergency Generator

As part of the HRA analysis (pg. C3-22), the lead agency assumed that there would be a 600 kW emergency generator (Generac Model SD600) modeled with the following parameters: exhaust gas exit temperature of 879 degrees Fahrenheit; a stack diameter of 23 feet; and exhaust gas exit velocity of 10,755 feet/min. To verify these parameters, the SCAQMD staff evaluated the SD600 model emergency generator from information available on the manufacturer's website (http://www.generac.com/Industrial/). According to the documentation for this engine, the actual parameters are exhaust gas exit temperature of 1,300 degrees Fahrenheit; a stack diameter of 0.67 feet (8 inches); and a calculated exhaust gas exit velocity of 9,195 feet/min (based on 6,419 cfm). Table C3-4-1 also has a reference to the stack diameter of the emergency generator of 0.23 feet. Because of these discrepancies, the SCAQMD staff requests that the lead agency verify the parameters used to model the proposed project emissions from the emergency generator, and if necessary, remodel the impact from the emergency generator.

In addition, the lead agency specifies that the PM emission factor for the emergency generator will be 0.2 g/bhp-hr. This emission rate is equivalent to a Tier 4 level which is required of emergency generators beginning in 2015. If the emergency generator is manufactured prior to 2015, the requirement is that it meet a PM level of 0.75 g/bhp-hr. The SCAQMD staff is

recommending that the lead agency closely monitor requirements for emergency generator to ensure that it meet the Tier 4 requirement, or remodel the proposed project emissions from the emergency generator using the PM level of 0.75 g/bhp-hr.

Refueling Trucks
The lead agency states that the "Refueling trucks visiting the SCIG facility were modeled as exiting the facility and using the PCH to the I-110 and I710 freeways, and then north on these freeways to the interchanges with the I405" (pg. C3-2). In addition, on page 3.2-31 of the DEIR, the lead agency states that for refueling trucks "The average on-site travel distance is 0.25 miles per round trip." The SCAQMD staff is requesting clarification whether refueling trucks were modeled on-site in the HRA and requests clarification of the on-site assumptions for refueling trucks. The SCAQMD staff received modeling files in late January and has not had sufficient time to review these files.

Sensitive Receptors
The DEIR does not disclose to the public what sensitive receptors were identified. In Figures 3.2-1 and C3.3-2 of the DEIR, the lead agency presents the location of sensitive receptors relative to the proposed project site. It impossible to identify the actual location and what sensitive receptor is identified based on these figures. In addition, it is impossible to identify if sensitive receptors were inadvertently excluded. The lead agency should present a figure showing the sensitive receptors with an added identifier (e.g., number), along with accompanying table listing the sensitive receptor, map identifier, location, and receptor classification (e.g., school, hospital, nursing home, pre-school, etc.).

Greenhouse Gas Impacts and Mitigation
Mitigation Measure-2: Solar Panels
In response to the significance finding under Impact GHG-1, the lead agency proposes several mitigation measures to reduce, but not eliminate the impacts of this greenhouse gas threshold. One of the most significant measures is Mitigation Measure MM GHG-2: Solar Panels. The SCAQMD staff considers MM GHG-2 to be too general and lacks any requirement that solar panels be installed. In order to reduce the measure's generality and ensure that solar panels be required if deemed feasible, the SCAQMD staff recommends that the measure's language be re-worded to state "The Port shall review the feasibility of including *solar panels at* the future SCIG site *and, if appropriate, include SCIG* on their Inventory of Potential PV Solar Sites at POLA from their December 2007 Climate Action Plan."

Zero emission technolgoies discussed above are feasible mitigation measures for greenhouse gas emissions.

Table 3.6-4 Inconsistency
In Table 3.6-4 of the DEIR the annual GHG operational emissions of the proposed project are presented. The emissions impact is also presented by determining the difference between the proposed project GHG emissions in a given year with the CEQA baseline GHG emissions. At the end of the table there is a footnote (footnote "c") that states the CEQA baseline emissions do not include the emissions from drayage trucks and locomotive emissions to and from the BNSF Hobart Railyard for years 2013 through 2015. The footnote is not included for years 2016 and

beyond. In reviewing this table, the SCAQMD staff has noted that the values for the CEQA GHG baseline emissions are the same for all years and are identical to those presented in Table 3.6-1: Baseline (2005) Annual GHG Emissions (which includes the emissions from drayage trucks and locomotive emissions to and from the BNSF Hobart Railyard). This would seem to indicate that the GHG emissions from drayage trucks and locomotive emissions to and from the BNSF Hobart Railyard were included for all years, making the footnote incorrect.

The Final EIR must include: (1) justification on the use of two different CEQA baselines; and (2) clarification on how the emissions from drayage trucks and locomotive emissions to and from the BNSF Hobart Railyard were factored into the CEQA baseline for the various years in Table 3.6-4. The Final DEIR must include a GHG operational emissions table that reflects the true values for both the CEQA baseline and the proposed project impacts.

Other Comments

Characterization of U.S. EPA locomotive rule

The DEIR Chapter 2 – Project Description contains a description of the 2008 U.S. EPA locomotive rule (40 CFR Part 92). This description is inaccurate and needs to be re-written. According to the DEIR description "…by 2011, all diesel diesel-powered Class 1 switcher and helper locomotives entering Port facilities must be Tier 3, and must use 15-minute idle limit devices." Under the 2008 U.S. EPA locomotive rule there is no requirement that Class 1 switchers and helper locomotives meet Tier 3 by 2011. However, CAAP Control Measure RL-1 does require that all PHL switchers be equipped with 15-minute idling devices and when used on Port property meet Tier 3-plus standards by the end of 2011, contingent upon funding being available. The 2008 U.S. EPA locomotive rule does require anti-idling devices on locomotives, but only when for new Tier 3 and Tier 4 locomotives, or for lower tiers when they undergo their first remanufacture under the new standards. The DEIR description also contains, "Beginning in 2012 and fully implemented by 2014, the fleet average for Class 1 long-haul locomotives calling at Port properties must be Tier 3 equivalent (Tier 2 equipped with diesel particulate filters (DPF) and selective catalytic reduction (SCR) or new locomotives meeting Tier 3) PM and NOx and will use 15-minute idle restrictors." However, the 2008 U.S. EPA locomotive rule has no requirement that by 2014 the locomotives entering the Ports meet Tier 3. Finally, the DEIR description includes this statement "Class 1 long-haul locomotives must operate on ultra low sulfur diesel (USLD) while on Port properties by the end of 2007." This is not a requirement in 2008 U.S. EPA locomotive rule. Low sulfur fuel is however, required in the 2004 U.S. EPA Clean Air Nonroad Diesel Fuel Rule, but does not take effect until June 2012. The SCAQMD requests that the description of the 2008 U.S. EPA locomotive rule be amended in the Final DEIR to reflect the actual rule requirements.

Surrounding Land Uses

The lead agency describes the surrounding land uses in the Executive Summary and Chapter 1 (pg. 1-3) in terms of being primarily industrial. On page 1-3 of the DEIR the lead agency states: "The proposed Project site is located near the Wilmington community to the west and the City of Long Beach to the east, in a primarily industrial area…" On page ES-3 of the DEIR the lead agency further states: "… primarily industrial area bounded generally by Sepulveda Boulevard to the north, Pacific Coast Highway (PCH) to the south, the Dominguez Channel to the west, and the Terminal Island Freeway to the east (Figure ES-1). The general area is characterized by

heavy industry, goods handling facilities and port-related commercial uses consisting of warehousing operations, trucking, cargo operations, transloading, container and truck maintenance, servicing and storage, and rail service." These descriptions do not accurately reflect the fact that there is a residential area with several sensitive receptors (e.g., schools) just to the east of the facility on the east side of the Terminal Island Freeway. To better represent the description of the surrounding land uses, the DEIR must include a description in the Executive Summary and Chapter 1 similar to the statement found on page 2-7 of the DEIR, which states the following: "The area to the east, across the Terminal Island Freeway within the West Long Beach area, is predominantly a single-family residential area, but it includes a high school, an elementary school, and a nursery school, as well as veteran's housing and a medical center." In addition, the DEIR should include a figure that depicts the general land uses of the surrounding area for greater clarity as well as a list of all sensitive receptors. We have included a figure (see Figure 1) which presents the surrounding land use broken out into commercial/industrial, residential, and sensitive receptors.

Emission Estimation Assumptions

In reading through the DEIR, the SCAQMD staff has noted that some of the underlying assumptions used in the analysis are unclear, missing, or spread out in various places of the document. In order to improve the understanding of the DEIR, the SCAQMD staff recommends that clear and unambiguous tables by source category, activity, and year be included that summarize the assumptions used in the emission estimates and HRA analysis.

ATTACHMENT B
ZERO-EMISSION CONTAINER TRANSPORT: NEEDS AND TECHNOLOGIES

Overview

SCAQMD comments regarding the proposed Southern California International Gateway railyard propose a commitment by the lead agency to require deployment of zero-emission technologies to move containers between ports and the proposed SCIG railyard. The specific technology or technologies used to implement this alternative would be determined by the lead agency. This alternative would be implemented according to the schedule set out in the comment, with deployment beginning by 2016. By 2020, all container moves between the ports and SCIG would be by zero emission technologies.

Any of several types of zero-emission container movement systems could be used to implement this measure. As is described below, these include, but are not limited to, on-road technologies such as battery-electric trucks, fuel cell trucks, hybrid-electric trucks with all-electric range (AER) and zero-emission hybrid or battery-electric trucks with "wayside" power (such as electricity from overhead wires). The measure could also be implemented by fixed-guideway systems such as maglev or linear synchronous motor propulsion.

Such systems are not currently in use for full-scale port operations and, depending on the technology, may require different levels of additional development and optimization. But, as is described below, a variety of these technologies are being demonstrated, and there is substantial evidence that they can be made commercially available within a few years after commencement of proposed Project operation, particularly if the Ports send a market signal to technology developers by requiring the use of zero-emission technologies. In addition, many of these zero-emission technologies are expected to be operationally feasible to serve the ports. For example, electric trucks with adequate range, power and reliability -- such as are being developed and demonstrated at the Ports -- could fit into current operating procedures as a replacement for fossil fuel-powered trucks, and their implementation could be required and co-funded through mechanisms similar to those employed to implement the ports' Clean Truck Program (see below). Drayage service to the proposed Project is particularly conducive to implementation of zero-emission trucking technologies because of the relatively short distance involved and because the SCIG railyard could be served by a relatively limited number of trucks compared to the total number serving the ports and region.

Reasons for Zero-Emission Transport

As is described in the SCAQMD comment letter regarding the SCIG DEIR, deployment of zero-emission technologies for transport between the ports and the proposed Project will mitigate significant project impacts as required by CEQA. In addition, zero emission transport is important for the following reasons:

- In the 2010 Update to the San Pedro Bay Ports Clean Air Action Plan, the ports underscored their commitment to air quality improvement by adopting San Pedro Bay Standards. These targets for port air quality programs are comprised of two components: 1) reduction in health risk from port-related diesel particulate matter (DPM) emissions in residential areas surrounding the ports, and 2) "fair share" reduction of port-related air emission to assist the region in achieving federal air quality standards. These components reflect the ports' stated goals of reducing health risks to local communities from port-related sources, and reducing emissions to support the attainment of health-based ambient air quality standards on a regional level.

  Specifically, the ports' Health Risk Reduction Standard is to reduce the population-weighted cancer risk of ports-related DPM emissions by 85% by 2020, relative to 2005 conditions, in highly impacted communities located near port sources and throughout the residential areas in the port region. The San Pedro Bay Emission Reduction Standards are to, by 2014, reduce emissions by 22% for nitrogen oxides, 93% for sulfur oxides, and 72% for DPM; and to, by 2023, reduce emissions by 59% for nitrogen oxides, 93% for sulfur oxides and 77% for DPM.

  While the ports have made significant progress toward meeting these goals, as reflected in each port's annual emission inventories, emissions forecasts indicate that CAAP measures and existing emissions control regulations will not be adequate to achieve and maintain the San Pedro Bay Standards. Implementation of zero-emission technology options would provide significant benefits to the ports, bringing them closer to achieving the San Pedro Bay Standards, addressing community concerns about pollution from port operations and projects, and assisting the region in attaining National Ambient Air Quality Standards. The South Coast Air Quality Management District and the California Air Resources Board have determined that, in order to attain currently-adopted federal ozone standards, zero-emission technologies will need to be broadly deployed in transportation sources. Absent timely adoption of sufficient plans and measures to attain the national standards as required by the Clean Air Act, federal transportation funds for infrastructure projects will be jeopardized, and restrictions on construction of stationary sources will be imposed.

- Deployment of zero-emission technologies for the transport corridor between the ports and the SCIG facility is particularly important for the following reasons:

  – Emissions in this transport corridor occur relatively close to locations where people live, work and go to school.

  – These areas are also impacted by cumulative emissions from other port-related sources: ships, harbor craft, cargo handling equipment, locomotives and trucks.

  – Achieving emission reductions beyond current regulations and CAAP measures, as needed to attain the San Pedro Bay Standards, will be relatively challenging in the case of some port-related sources (e.g. vessel main engines) compared to further reducing emissions from other sources such as trucks.

  - The transport corridor to near dock rail yards is in an area where existing regulations and CAAP measures are projected to achieve a lower percentage level of risk reduction than other areas. *See* 2010 CAAP Update, Figure 2.2: Percent Reduction in DPM-Related Health Risk Between 2005 and 2020 for Areas Located Closest to the Ports (p.35).

  - The transport corridor to near dock rail yards--as a high volume, relatively short (approximately five mile)--route, is particularly suited to deployment of new technologies such as electric trucks, which ultimately could be deployed by the ports, and then in broader areas as technologies evolve.

- In addition to air quality benefits, utilization of zero-emission technologies could be a significant strategy for reducing greenhouse gas (GHG) emissions. Each port, in cooperation with their respective cities, has initiated a process to quantify, evaluate and implement strategies to reduce GHG emissions from their administrative operations as well as from port-related activities of their tenants and customers.

- Finally, energy security (i.e. reducing dependence on foreign oil) is also a significant consideration as the ports transition into the future. Uncertainty about potential future supplies of oil and rising costs provide another reason for moving away from technologies that rely on petroleum to technologies that are powered by electricity, ideally produced using renewable energy sources.

Zero-Emission Container Transport Technologies

A variety of zero-emission technologies can be available for deployment early in the life of the proposed Project if the port requires them. The following is a discussion of key technology options.

Zero-Emission Trucks

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 transit buses and heavy mining trucks (discussed below). All 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 technology. Hybrid-electric trucks with all electric range can provide zero emissions in certain corridors and flexibility to travel extended distances (e.g. outside the region) powered from fossil fuels or fuel cells.

Vehicles employing electrified drive trains have seen dramatic growth in the passenger vehicle market in recent years, evidenced by the commercialization of various hybrid-electric cars, and culminating in the sale of all-electric, plug in, and range extended electric vehicles in 2011. A significant number of new electric light-duty vehicles will come on the market in the next few years. The medium- and heavy-duty markets have also shown recent trends toward electric drive technologies in both on-road and off-road applications, leveraging the light-duty market technologies and component supply base. Indeed, the California-funded Hybrid Truck and Bus

Voucher Incentive Project (HVIP) website' currently lists more than 75 hybrid-electric on-road trucks and buses available for order from eight manufacturers.

Battery-Electric Trucks

Battery-electric vehicles operate continuously in zero-emissions mode by utilizing electricity from the grid stored on the vehicle in battery packs. Battery-electric technology has been tested, and even commercially deployed for years in other types of heavy-duty vehicles (e.g., shuttle buses). Technologically mature prototypes have recently become available to demonstrate in drayage truck applications. (TIAX, *Technology Status Report - Zero Emission Drayage Trucks*, 1 (June 2011)).

The Port of Los Angeles is testing the Balqon Nautilus XE30 battery-electric truck prototype. Early tests of the Balqon E-30 began in 2008 with a lead-acid battery pack. In subsequent manufacturer tests the truck was equipped with a larger and more advanced lithium-ion battery pack, and the port has stated it will demonstrate this upgraded vehicle commencing in fall of 2011. Manufacturer's tests of the upgraded vehicle have shown a maximum range of between 125 – 150 miles loaded, and dynamometer results indicate ability to climb a 15% grade while fully loaded for two hours. (TIAX, 7). The port demonstration will test performance in actual operations against these and other metrics.

The performance metrics being targeted by the manufacturer would be sufficient to meet the needs of service between near dock rail yards and the ports. These needs are relatively limited, primarily due to the short distance between the ports and near dock rail yards: approximately 10 miles round trip. This limits the required number of trucks, as well as their needed range and charging time.

Number of Trucks. Regarding number of trucks needed, at full build out, at least 2,100,000 annual round trip truck trips are anticipated between proposed near dock rail yards and the ports -- an average of 5,753 per day. TIAX assumed that a Balqon truck would make 12 round trips per day, assuming three shifts per day (TIAX, 14). This would total 120 miles per day per truck (within the loaded range estimated by the manufacturer for a single charge), and would indicate a need for 480 trucks to fully serve the rail yards. (A substantially lower number would be needed just for SCIG). Adding 8% to account for seasonal variation (TIAX, 9) indicates a need for 518 trucks to serve the near-dock yards. Balqon has estimated that it could produce as many as three trucks per day due to modular truck design, which would enable it to deliver more than 750 trucks per year. This would, in one year and for one manufacturer, be well in excess of the fleet size needed to serve proposed SCIG railyard.

Charging Time. Regarding charging time, Balqon offers a 60kW charger that would require 4.5 hours for a full charge. Balqon is working on a 100kW charger that would reduce charging time, as well as the number of required chargers and peak electrical demand. (TIAX, 14). In addition, quick charge technologies are now being manufactured, e.g. by AeroVironment which are in use by Foothill Transit electric buses to allow continuous service for a set route. Such technologies could be adapted to allow charging of trucks in much less than one hour. In addition, various charging strategies are available that could further reduce time dedicated to charging. These include battery swapping and "opportunity charging." (TIAX at 13). Even assuming a 4.5 hour

charging time every day, however, would allow 12 round trips to near dock rail yards per day (TIAX at 14; assuming round-trip duration of 1.6 hours. (Id. at 15)).

Implementation Time. TIAX recommends 6 to 12 months of tests in real world drayage operations, followed by an assessment and an additional larger scale demonstration of 12 to 18 months duration. (TIAX, 20-21).

To the extent that in-use performance testing indicates a need for improvements such as greater range or gradability for a battery-electric truck such as Balqon, resolving such technical issues is, in general, a matter of appropriately sizing and engineering key components—notably the battery. A variety of battery sizes are feasible, although there are trade-offs such as weight and cost. The limited range requirements of service to near dock rail yards will, however, minimize the impact of any such trade-offs.

Given these factors, it is expected that battery-electric trucks can be developed and manufactured in sufficient time and quantities to fully serve near dock rail yards by 2016, even if modifications in response to demonstration tests are required.

Costs. As with most new technologies, capital costs are higher for electric-drive trucks compared to conventional diesel trucks. However, operating and maintenance (O&M) costs of electric-drive trucks can be significantly lower, due to higher vehicle fuel economy (reduced fuel costs per energy used) and lower maintenance costs. TIAX calculated a ten-year cost for the Balqon truck, including capital cost of truck, operation and maintenance, at $363,841 - $391,233, about $30,000 - $60,000 more than the $335,041 cost for a diesel truck. This differential cost is, however, well within the amount of government incentive funding for relatively clean technologies that has been provided in the past for vehicles such as LNG trucks, and which is currently available (see below). Cost of charging infrastructure would vary greatly based on conventional or quick charging, and charging strategy (e.g. whether battery swapping and opportunity charging occur). TIAX estimated costs of one approach at between $26.4 and 30.4 million for a fleet of 720 trucks (TIAX, 14) -- well in excess of the number needed to serve SCIG. Again, various government funding programs have been and continue to be available for installation of charging infrastructure.

Charging infrastructure is quickly decreasing in cost. Nissan recently announced a DC-fast charging system one-fourth the price of current systems, specifically $10,000 compared to $40,000 used in the TIAX assessment [http://wot.motortrend.com/nissan-announces-low-cost-dc-quick-charger-for-us-135121.html] The rapid advances in charging infrastructure and economies of scale will undoubtedly continue to drive hardware costs lower.

Since the electric drayage truck is still in its early commercialization phase, the costs are expected to come down as the technology matures, unit volumes increase and economies of scaled production and supply take effect. Balqon estimates that with large scale purchase commitments and its partnership with Winston Battery Limited, the largest heavy-duty lithium battery manufacturer in China, battery costs will come down to half their current costs.

Operational Issues. The ports have devoted substantial resources to developing and

demonstrating electric trucks in part because they would fit well into current operating modes, with minimal or no need for new transportation infrastructure such as roads or new fixed guideway systems. Operational issues thus are expected to be manageable.

It should also be noted that the successful deployment of nearly 900 natural gas drayage trucks since 2008 indicates that the drayage industry can adapt to operational changes and adapt to new fueling procedures and limitations. Most of these natural gas drayage trucks are routinely being refueled at a small number of public stations located near the ports, although some motor carriers are installing onsite natural gas refueling stations. Refueling can take longer than diesel, and during peak times, the waiting time at the limited number of natural gas fueling stations can exceed one hour. Motor carriers have been able to make adjustments to this process. Weight and payload considerations significantly restrict the amount of onboard energy that LNG drayage trucks can carry compared to diesel trucks. However, in a local delivery application such as drayage, LNG trucks can provide plenty of driving range to meet daily operational requirements. In these ways and others, drayage truckers using natural gas rigs have been able to accommodate fuel-related changes in operational requirements. (TIAX, 16).

Implementation Mechanisms. The ports have shown ability to craft programs to transition on-road trucks to new technologies. The successful Clean Trucks Program provides one model of a feasible mechanism to do this for the proposed SCIG railyard-related drayage. Through progressive bans of older vehicles and funding and fee mechanisms to provide incentives, the ports succeeded in transitioning from relatively old diesel truck drayage to thousands of new diesel trucks, and nearly 900 LNG trucks. The number of vehicles needed in connection with proposed SCIG railyard is far less. In addition, through approval conditions on the marine terminal project, the lead agency has the ability to ensure cooperative actions by the applicant to assist in the transition.

Figure 1 Balqon Electric Battery Truck

Fuel Cell Battery-Electric Trucks

Fuel cell vehicles utilize an electrochemical reaction of hydrogen and oxygen in fuel cell "stacks" to generate electricity onboard a vehicle to power electric motors. Fuel cells are typically combined with battery packs, potentially with plug-in charging capability, to extend the operating range of a battery-electric vehicle. Because the process is combustion free, there are no emissions of criteria pollutants or CO2.

Fuel cell vehicles are less commercially mature than battery-electric technologies, but have been successfully deployed in transit bus applications, and are beginning to be deployed in passenger vehicles. The Port of Los Angeles recently awarded Vision Motor Corporation (Vision) of El Segundo, California a contract to outfit fifteen battery electric trucks with fuel cells for demonstration purposes. Total Transportation Services, Inc. (TTSI), a port drayage company, has stated an intent to buy 100 "Tyrano" fuel cell Class 8 trucks from Vision for $27 million, subject to an initial vehicle (which was delivered on July 22, 2011) performing as expected. TTSI also stated it may acquire an additional 300 vehicles. TTSI intends to test the initial truck for 18 months by using it to haul containers between the ports, rail yards and distribution facilities.

Vision estimates that its fuel cell electric battery trucks would have an operating range of 200 miles on a single charge, with the proposed 20 kg of hydrogen storage and 130 kWh battery pack, while at the same time lowering operating and maintenance costs as compared to diesel-powered trucks. The company's engineers report the vehicle has a rated gradability of 13% when fully loaded at 80,000 GVWR; this should enable it to meet all grades that will be encountered in short-haul drayage. (TIAX, 7).

TIAX recommends an 18 month demonstration period in drayage operations, followed by an assessment and a further large scale demonstration for 12 to 18 months. (TIAX, 21). Given these factors, it is expected that fuel cell battery-electric trucks can be developed and manufactured in sufficient time and quantities to fully serve proposed SCIG railyard before 2016, even if modifications in response to demonstration tests are required.

The discussions above regarding number of vehicles needed, operational issues and implementation mechanisms are generally applicable to fuel cell trucks, although hydrogen fueling time would be less than Balqon truck charging time, and would be similar to fueling time for current LNG trucks. (TIAX, 17). Per vehicle combined capital and operating costs, as well as fueling infrastructure costs, are projected by TIAX to be higher than for the Balqon truck, although costs could be below the TIAX projections if certain cost reductions expected by Vision are realized, and if cost of fueling infrastructure is recovered through revenue sales. (TIAX, 12, 15). In addition, as noted above, Vision does have a private purchaser with a potential sale of at least 100 units. Vision Motors believes the cost for hydrogen for their fuel cell heavy-duty truck can be cost-competitive with and even lower than diesel fuel. Based on a planned station near the existing hydrogen pipeline, which provides hydrogen to the refineries, there is ample supply near the ports. Vision has estimated a cost of hydrogen at $2.50/kg (equivalent to 1 gallon of diesel) compared to $4/gallon for diesel.

[http://www.visionmotorcorp.com/downloads/VIIC%20Investment%20Deck_General%2007-05-2011h.pdf].

Figure 2 Vision Zero-Emission Fuel Cell Battery Electric Truck

Hybrid-Electric with All-Electric Range (AER) Trucks

Hybrid vehicles combine a vehicle's traditional internal combustion engine with an electric motor. Hybrid-electric heavy-duty trucks that improve fuel mileage are in commercial operation today. Hybrid-electric technologies can also be designed to allow all electric propulsion for certain distances, similar to the Chevrolet Volt passenger automobile which is currently being marketed. The large vehicle drive-train manufacturer Meritor has developed such a heavy-duty truck and it is being demonstrated by Walmart Inc. in the Detroit area. This "dual mode" vehicle was developed as part of a U.S. Department of Energy program. Besides the advantages of increased range flexibility, dual-mode hybrid trucks can incorporate smaller battery packs as compared to those for all-battery electric trucks. This saves weight and cost while increasing range.

The Meritor truck is powered solely by battery power (i.e. produces zero emissions) at speeds less than 48 mph. (http://walmartstores.com/sustainability/9071.aspx). This speed is likely sufficient to serve proposed SCIG railyard drayage needs. The vehicle can maintain zero-emission operation for 20 miles, sufficient for two round trips to near dock rail yards with zero emissions, but the vehicle could be coupled with plug-in charging capability. The latter would open the potential for 24-hour zero-emission operation using existing quick-charge technologies. Battery capacity could also be augmented in production units, based on specific needs.

Figure 3: Dual-Mode Hybrid (Meritor)

The discussions above regarding number of vehicles needed, operational issues and implementation mechanisms are generally applicable to hybrid AER trucks. Costs for commercially available units are unknown at this time, but would likely be slightly more than conventional hybrids as larger battery packs would be needed for the electric only mode. The incremental cost of a hybrid AER truck compared to a diesel truck is anticipated to be approximately $50,000-70,000 depending on the capacity of the battery pack. This incremental cost is similar for LNG trucks which were successfully funded through a combination of grants for the Ports' Clean Truck Program (see below).

Since this technology is currently being demonstrated and is similar to hybrid electric technologies that are currently being marketed, it is expected that hybrid AER trucks could be deployed in a similar timeframe as full battery-electric trucks. As with the other zero-emission technologies described here, a key need to ensure timely deployment is a clear message from the ports to technology developers that such technologies will be required.

Trucks With Wayside Power (e.g. "Trolley Trucks")

As noted above, given the relatively short distance between the ports and near dock rail yards, several types of zero-emission trucks can feasibly be made available in coming years. One largely existing technology that could be used to serve this need, as well as move trucks regionwide, is wayside power to power motors and/or charge vehicle batteries. Wayside power from overhead catenary wires is commonly provided to on-road transit buses, and has been used for heavy mining trucks. Other potential wayside power technologies that serve the same purpose include linear induction, which can charge batteries from electromagnetic systems in roadbeds without a physical connection or exposed wires.

An example of how wayside power is feasible would be to outfit a battery-electric or hybrid AER truck with a connection to overhead catenary wires. Many cities operate electric transit buses that drive on streets with overhead wires, as well as streets without them. In such cities, "dual-mode" buses have capability to disconnect from the overhead wire and drive like a conventional bus. In Boston and other cities, such buses are propelled "off wire" by diesel engines. In Rome, such buses are propelled off wire by battery power to the same electric motors used on wire. The batteries are charged as the bus operates on the wired roadways. Figure 4 shows a dual-mode electric and battery-electric transit bus with detachable catenary connection in Rome, Italy.[13]

[13] Other proposals have been evaluated and awarded by the SCAQMD and the CEC to develop catenary trucks and hybrid trucks with AER. Similarly, in 2010, Volvo announced an award by the Swedish Energy Agency

Figure 4 Dual-Mode Battery Electric Transit Bus (Rome)

The global technology manufacturer Siemens has developed a prototype truck to catenary wire connection for this purpose. Figure 5 shows a photo of this system on a prototype roadway in Germany. The truck is a hybrid electric with zero emission all electric operation when operated under the overhead wire. The truck automatically senses the wire which allows the driver to raise the pantograph connection while driving at highway speeds. The pantograph automatically retracts when the truck leaves the lane with catenary power. The powered lane can be shared by cars and traditional trucks. The truck may be operated off the powered lane propelled by a diesel engine, or could be configured with battery or fuel cell power sources.

Figure 5 Truck Catenary (Siemens)

As applied to hybrid AER trucks, wayside power could provide zero-emission operation and battery charging on key transport corridors, allowing the vehicle to operate beyond such corridors in zero-emission mode. As the battery is depleted, the vehicle would have the flexibility for extended operation on fossil fuel power.

As existing technologies long used in the transit bus sector, an application of wayside power for trucks would be technologically feasible and could be implemented relatively soon. Siemens retrofitted existing trucks for its prototype road in Germany.

The key feasibility and cost issues presented by wayside power are associated with need for power infrastructure such as overhead catenary wires. Rights of way must have room for such infrastructure, although they could be limited to key corridors and still provide the battery charging benefits described above. Cost of overhead catenary wires would have to be estimated

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to develop a “slide in” technology for both automobiles and trucks which would provide wayside power from the road to the vehicle using a connection from the bottom of the vehicle to a slot in the roadway (http://www.energimyndigheten.se/en/Press/Press-releases/New-initiatives-in-electrical-vehicles/).

by corridor as it varies by circumstance, e.g. based on available space, but would likely be from one to a few million dollars per mile. Operational cost benefits due to reduced fuel and maintenance costs for electric technologies would offset a portion of these costs. Based on communications with Siemens and other equipment manufacturers, AQMD technology advancement staff concludes it would be feasible to deploy catenary electric trucks within a few years and early in the life of the proposed SCIG railyard.

Fixed-Guideway Systems

Fixed guideway systems, as the name implies, are mechanisms that move the containers on rails, magnetic levitation tracks, or other fixed structures. An example of a fixed guideway zero-emission container movement system in use today is an electric locomotive pulling a train of containers. Such electric locomotives receive power from overhead catenaries or electric third rails, and are used for freight transport in Europe, Asia and other locations, but not in the United States. Figure 6 shows an electric freight locomotive in Europe.

Figure 6 European Electric Freight Locomotive

The fixed guideway approach would consist of development of infrastructure to move containers between the ports and the SCIG facility using magnetic levitation, linear motor technologies, or catenary/third rail power. Unless existing rail lines could be utilized without impeding other operations, the guideways would be purpose-built, which would likely require right-of-way acquisition. Several technology developers have proposed to the ports to use linear motors to propel containers on purpose-built fixed guideway systems, including maglev systems. Under this approach, containers would be loaded onto specialized shuttles conveyed between port terminals and the SCIG facility. In another variation, electric or diesel trucks would interact with ports and rail terminals as conventional trucks do today, but would be propelled on certain roads by linear synchronous motors in the roadbed. Linear motors propel vehicles using electromagnetic force created by a wire coil embedded in the road.

Light rail train and subway lines have operated for years using linear motor technology, and it is expected that, given sufficient resources, this technology can technologically be adapted for freight movement. The staffs of the two ports have, however, focused their zero-emission technology development and demonstration efforts on truck technologies and, recently, technologies to move line-haul rail. (*See*, *Roadmap for Moving Forward with Zero Emission Technologies*,

presented by port staffs on July 7, 2011 at a joint meeting of the Harbor Commissions of the Ports of Long Beach and Los Angeles). The port staffs have stated concerns about (1) congestion on existing rail lines if they are used to move containers between the ports and near-dock railyards, and (2) about cost and operational feasibility of creating new types of fixed guideway systems. Regarding the latter, the port staffs have cited the results of a "Request for Concepts and Solutions" (RFCS) the ports issued in conjunction with the Alameda Corridor Transportation Authority to design, build, finance and operate a zero emission container movement system (ZECMS). The seven responses to the RFCS included six fixed-guideway systems and one truck-based system (hybrid truck with all electric range).

The responses to the RFCS were reviewed by a panel chosen by the Keston Institute at USC, which determined that none of the proposals demonstrated that the intended ZECMS objectives would be achieved. The Keston panel stated that, prior to selection and deployment of any system, additional testing needs to be carried out in an environment that simulates actual container handling operations. The panel also concluded that a ZECMS would have difficulty competing economically with conventional truck drayage.

It should be noted, however, that the Keston panel did not conclude that zero-emission transport is infeasible, and, indeed, concluded that it is technologically feasible. As the panel stated:

> *"(T)he panel believes that the submissions illustrate that the concept of a ZECMS is well within the realm of technological feasibility and that potentially viable technologies either already exist or could believably be available within a relatively short timeframe. In other words, a ZECMS is, or could be shortly, technically feasible."*

(The panel also noted that the one truck technology proposed—hybrid trucks with all electric range—had achieved the target level of technology readiness for selection and deployment.[14])

A key issue found by the Keston panel for fixed guideway systems was that the solicitation prohibited any public funding of, or government requirement for, zero-emission technologies, even during the initial development and startup phase. The panel said:

> *In light of the capital intensive nature of fixed guideway systems and the best case assumptions regarding growth in container volume, market share, capital costs, and system availability used in many of the proposers' analyses, the panel believes that, absent other drivers (e.g., environmental regulations or a subsidy provided by the Ports or others), a ZECMS will have difficulty competing economically with conventional truck drayage, particularly given the rapid advances being made in hybrid-electric vehicles and their inherent flexibility and scalability. . . . The RFCS was quite clear that a ZECMS would be in direct competition with the existing system of truck drayage, so that it had to match or improve the total economic value it offered compared to the existing system—the Ports would not provide any subsidy nor would they compel port users to use the ZECMS.*

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[14] The panel stated: "*Although not strictly a 'zero emission' technology in all operational modes, the panel believes that the hybrid truck has achieved the equivalent of TRL 8. Under the assumption that hybrid trucks would be operating in the electric mode in the port environs, this technology would be viewed as compliant with the goal of removing combustion emissions from port operations."*

It should be noted, however, that public funding has in the past been considered appropriate to develop and deploy new clean technologies, including by the ports, and such funding is and will likely continue to be available in the future (see below). In addition, the JPA and ports have clear authority, which they have exercised in the past, to require and incentivize use of new technologies.

Rail

In addition to implementing zero-emission technologies such as electric trucks to move containers between the ports and the SCIG facility, the measure proposed by SCAQMD would require the JPA or ports to take actions to evaluate and demonstrate zero-emission technologies for line-haul locomotives. Zero-emission electric locomotives are an existing technology in use around the world for freight and passenger transport. One issue to be addressed in implementing such technology in Southern California would be the transition to non-electrified track outside of the region. One potential solution is to switch between electric and diesel locomotives at the edge of the region. It should be noted, however, that the railroads have in the past objected to the time, expense and railyard space needed to switch to cleaner locomotives when trains enter this region. A second major issue is the expense of electrification infrastructure such as overhead catenary wires, and the cost of electric locomotives.

Among the technologies to be evaluated under this alternative would be technologies that could eliminate the need for catenary wires, or to switch locomotives at the edge of the electrified region. These include dual-mode locomotives, such as are currently in use for passenger trains; battery tender cars to provide power to locomotives in certain areas; and hybrid-electric locomotives with all electric range. Finally, linear synchronous motor (LSM) technology has the potential to move trains on existing rail lines that are retrofitted with such technology.

Zero Emission Implementation Timeline Overview

A Gantt chart of the likely zero-emission technologies is shown in Figure 7, which illustrates expected timeframes for development, validation and evaluation of technologies. The timeframes are based on status of the specific technologies, and on typical timeframes for the referenced actions. These timeframes are based on proposals received for such technologies as well as technical experience by the Technology Advancement Office at the SCAQMD. Although each technology provider and manufacturer may describe these phases differently, the cycles are all on the order of five to seven years from development to commercialization. The development phase includes design and non-recurring engineering activities for the prototype technology. This phase also typically includes limited testing or simulation in preparation for field trials. The validation phase is testing and demonstration of the technology in the field, including data collection for design changes and optimization. During this phase, the technology design is tested to the actual performance standards (e.g., towing capability, gradability, speed, etc.). The final fleet evaluation phase includes multiple units in actual fleet or real-world use with potential for accelerated durability testing to gauge maintenance and reliability issues. During this phase, testing is conducted to ensure safety as well as working with the appropriate agencies for commercial certification.

It should be noted that the development phases for many of the truck projects were already initiated in 2008-2009 through efforts at the Ports, the SCAQMD and the DOE. The last phase of "evaluation" includes durability and certification activities, which may lengthen the phase depending on the field-trial experiences. Timeframes could also be shortened if sufficient funding is applied to increase resources toward that effort by the manufacturer. However, considering the current levels of product development and uncertainty, it is clear that, given sufficient clarity of purpose, all described technologies can be commercialized by 2016-2020, with some at earlier dates.

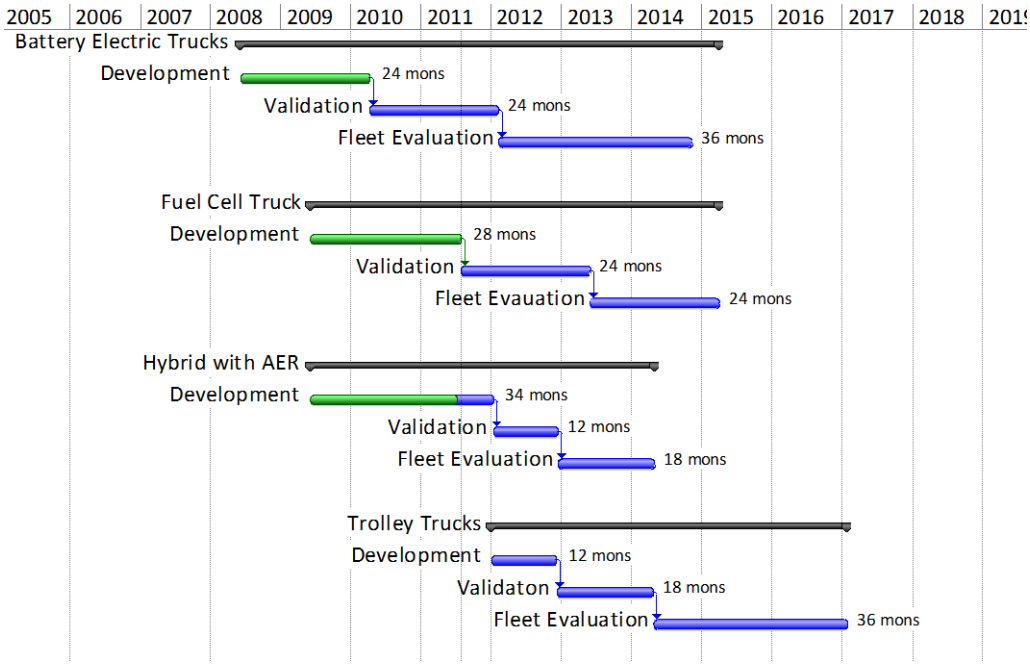

Figure 7: Commercialization Timeframes For Zero Emission Truck Technologies

Financing Support for Zero-Emission Technologies

A key aspect of technology development and commercialization is initiating and ensuring activities by technology manufacturers. Government can play a critical role by ensuring a market for the end product (e.g. by adopting emission control requirements), and by offsetting the typically high cost of technology development and initial deployment through funding incentives. This strategy has been used in Europe for zero-emission technologies, which is why manufacturers are working on zero-emission trucks, namely Siemens and Volvo. State and local governments in California have a long history of successfully requiring and incentivizing deployment of new technologies. Actions by the ports to require and incentivize clean technologies are thus of critical importance.

As noted above, the ports have implementation mechanisms such as project approval conditions and port rulemaking that can require transition to new technologies. In addition, a variety of sources exist for development and incentive funding. Potential sources of funding for air quality technologies include, but are not limited to, the ports, AQMD, and the future tenant. State and

local governments have a long history of incentivizing cleaner technologies through collaborative efforts. A recent example is the partnership with CARB, the Port of Los Angeles, the Port of Long Beach, U.S. Department of Energy, California Energy Commission and U.S. EPA for the buydown of the cleaner but more expensive natural gas trucks as part of the Ports Clean Truck Program. The AQMD utilized the existing Proposition 1B incentive of $50,000 per truck but augmented this with an additional $50,000 through grants from the U.S. Department of Energy, California Energy Commission and U.S. EPA as well as AQMD funds and the Ports. With the $100,000 incentive, fleets and independent operators were able to offset the higher cost of natural gas trucks which are approximately $150,000 – 170,000. Through this collection of incentives, the AQMD was successfully able to purchase over 690 natural gas trucks as part of the Ports' Clean Truck Program.

Other funding examples include the Hybrid Voucher Incentive Program (HVIP), which provides $20,000 per hybrid truck, including all-electric technologies. The AQMD further supplemented the HVIP by adding $1.5M for vehicles deployed in the South Coast Region. In May 2011, the California Energy Commission added an additional $4M to the HVIP to further incentivize electric vehicles making the per-truck funding $40,000 to $50,000. A list of currently available incentives for heavy-duty zero-emission trucks is included in the table below.

Incentive Program	Sunset Date	Project Category	Current Maximum Potential Funding/Credit Amounts
Carl Moyer Program	2015	New Purchase	25% of Total Purchase Price (Up to Cost-Effectiveness Limit of $16,640 per ton)
		Repower	$30,000 per truck
Proposition 1B	2013	Replacement	$60,000 per truck
		Repower	$30,000 per truck
HVIP	2015	New Purchase	$25,000 per truck (33 - 38K GVWR)
			$30,000 per truck (>38K GVWR)
Hybrid and Electric Trucks and Infrastructure Act (S. 1285)	Proposed to end by Dec. 2015	New Purchase	$24,000 per truck

Although some of these programs may not be in place at the time of the project initiation, it is anticipated that, given market demand, similar or renewed funding will be available.

Conclusion

Based on the above, there is substantial evidence to conclude that zero emission technologies can be deployed in the 2016 to 2020 timeframe (or earlier) to move containers between the ports and near-dock railyards — if the port requires such deployment.

ATTACHMENT C

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November 30, 2011

via electronic-mail and U.S. Mail

Mr. Christopher Cannon
Director of Environmental Management
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731

Re: Draft Environmental Impact Report: Southern California International Gateway

Dear Mr. Cannon:

INTRODUCTION

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the Southern California International Gateway railyard project. This comment letter focuses on the issue of the proper baseline under the California Environmental Quality Act (CEQA) for the air quality analysis of the proposed project. SCAQMD staff believes that the Port of Los Angeles (Port) needs to use a baseline that will accurately quantify and identify the impacts of the project. The current approach, which uses year 2005 emissions in the impacted area as the baseline, fails to meet these goals, at least for some analysis areas. SCAQMD staff will also be providing additional comments.

First, the DEIR contains a misleading discussion regarding the baseline for the health risk assessment. The DEIR states that "The air quality analysis and the health risk assessment (HRA) of toxic air contaminant emissions associated with construction and operation of the proposed Project reported in Chapter 3.2 were conducted in accordance with a project-specific protocol prepared by the Port and reviewed and approved by SCAQMD…." Section ES 8.1, p. ES-85. This sentence implies that SCAQMD has approved the Port's approach to the baseline issue, which is described in the immediately following sentence. SCAQMD has not agreed to the Port's approach to the baseline issue for the HRA, and requests that this be clarified in the final EIR.

THE ANALYSIS IN THE DEIR

The SCAQMD staff believes that the CEQA baseline selected by the Port obscures the actual impacts of the project. The DEIR states that the Notice of Preparation (NOP) for this EIR was released in September 2005, and that therefore, "the baseline conditions for the proposed Project are, in general, the operational activities that occurred, and conditions as they existed, in 2005." Section ES 2.3, p. ES-3. Furthermore, the DEIR states that "Pursuant to CEQA Guidelines Section 15125(a) and the *Sunnyvale West Neighborhood Association v. City of Sunnyvale* (2010) 190 Cal. App. 4th 1351 *(Sunnyvale)* case, the impacts were analyzed compared to the existing setting, which, for this project is the time of the Notice of Preparation (NOP) or 2005." Section ES 8.1, p. ES-85. The results of this analysis are presented in Appendix C-3.

As explained in the Appendix, "For the determination of significance from a CEQA standpoint, this HRA determined the incremental increase in health effects values due to the proposed Project by estimating the net change in impacts between the proposed Project and Baseline conditions." App. C-3, section 6.0, p. C3-34. This method of analysis resulted in a determination that the project impacts ("CEQA Increment") were negative 160 in a million cancer risk, which is to say that the project results in an actual reduction in cancer risk of 160 in a million compared to existing conditions. Table C3-7-1, p. C3-34.[1] However, this method of analysis improperly takes advantage of reductions in cancer risk that are the result of unrelated regulatory requirements and fleet turnover of mobile sources that are not the result of the project and would occur anyway if the project did not occur, as the existing tenants would be using cleaner equipment in the future than they are today.

THE DEIR ANALYSIS IS UNREALISTIC

A simplified example will illustrate the problem with the DEIR's approach.

Assume there is an existing facility that has emissions of 1000 lbs/day in the selected baseline year of 2005. In the future, if nothing else changes, the emissions will be reduced by the year 2020 to 500 lbs/day as a result of already-adopted and enforceable regulations and the impact of normal fleet turnover to newer vehicles (which are legally required to be cleaner than today's vehicles). The facility proposes a modification to increase operations so that its emissions in the year 2020 will be 750 lbs/day. If these emissions of 750 lbs/day are compared to year 2005 emissions of 1000 lbs/day, it appears that there is a reduction in emissions and no significant impact, even though in reality the modification added 250 lbs/day of emissions. As a result, there will be no alternatives and no mitigation measures designed to reduce that 250 lb/day increase. In our view, this approach does not comply with CEQA.

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[1] Due to site specific calculations, the " CEQA Increment" does not equate to the maximum impact under the CEQA Baseline minus the Proposed Project as illustrated in the Table. It would be very helpful to have an explanation of how the 160 in a million was derived.

The analysis of the health impacts suffers from the same defect identified above. The Appendix admits that the analysis takes advantage of emission reductions that are already required by existing rules, which in our view wrongly credits the project with unrelated emission reductions that would occur anyway, and would be even greater without the project. Thus, the Appendix states that factored into the impacts of the project were the following: "Reductions in emissions due to (a) the incidental phase-in of cleaner vehicles or equipment due to normal fleet turnover; (b) the future phase-in of cleaner fuels as required by existing regulations or agreements; and (c) the future phase-in of cleaner engines as required by existing regulations or agreements." Section 2.2, App. C-3, p. C3-4. Therefore, the project is given credit for emission reductions that would occur anyway, and would be even greater if the project did not occur. It defies common sense and logic to conclude—as the DEIR has—that a project largely designed to increase locomotive capacity will reduce cancer risk.

The purpose of CEQA is to "give the public and government agencies the information needed to make informed decisions, thus protecting 'not only the environment but also informed self-government.'" *In re Bay-Delta, etc.* (2008) 43 Cal. 4th 1143, 1162. CEQA also requires the lead agency to avoid or mitigate any significant adverse impacts to the extent feasible. Thus, CEQA contains a "substantive mandate" that public agencies not approve projects with significant environmental impacts if "there are feasible alternatives or mitigation measures" that can substantially lessen or avoid those effects. *Mountain Lion Foundation v. Fish and Game Commission* (1997) 16 Cal. 4th 105, 134 (emphasis in original). In our view, the use of year 2005 emissions as the baseline compared to future project emissions erroneously obscures the project's true impacts. Indeed, the approach taken in the DEIR would mean that projects in an urbanized area will frequently be identified to have no significant air quality operational impacts, because already-adopted air quality rules will so dramatically reduce emissions from existing equipment in the future that future emission—even with an expansion project—will be less than emissions at the time of the NOP. This approach is not consistent with CEQA because it fails to identify the significant adverse impacts *of the project*. CEQA Guidelines §15064 specifically requires the EIR to analyze the impacts of the project and determine "whether a project may have a significant effect…" and §15064(d) says "In evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project…" (emphasis added). The analysis in the DEIR violates this Guideline by not focusing on changes caused by the project and improperly taking credit for other changes that are not related to the project.

THE DEIR ALTERNATIVE ANALYSIS ILLUSTRATES A MORE REALISTIC APPROACH

The weakness in the DEIR approach is amply demonstrated by the alternative approach analysis which compares project impacts with what is called a "floating baseline." This means that baseline emissions "were estimated by fixing activity levels at the time the NOP was released and allowing for future changes in emission factors due to adopted rules and regulations." Section ES 8.1, p. ES-85. In other words, this alternative attempts to avoid the flaws of the EIR's primary approach it does not credit to the project the emission reductions due to adopted

rules that would occur anyway. Instead, such reductions are included in the alternative baseline. In our view, a baseline such as this alternative analysis that does not credit the project with reductions that would occur anyway due to adopted rules, is a more realistic baseline. However, the DEIR describes this analysis as one "not required by CEQA." *Id.* We believe that an analysis which realistically evaluates the impacts of the actual project, rather than crediting the project with unrelated future emission reductions, is in fact required by CEQA.

The "floating baseline" analysis, according to the Port's own calculations, results in a CEQA increment of 17 in a million cancer risk increase. Appendix C3 Section 7.4, table C3-7-10, p. C3-68. This risk level exceeds 10 in a million, which is the level identified by the Port as a significant increase. Appendix C3, Section 6.0, p. C3-33, and Table C3-7-1, p. C3-34.[2] Yet the DEIR as a whole concludes that the "CEQA Increment" using the 2005 baseline is a negative 160 in a million (i.e., a reduction in risk of 160 in a million), which is below the CEQA significance threshold of 10 in a million, so the impact is not significant. Appendix C3, Section 7.1, p. C3-34. Thus, the DEIR admits that the project increases cancer risk beyond what would occur without the project by 17 in a million, yet concludes there is no significant impact. This is an untenable result. It means that the DEIR fails to examine feasible mitigation measures or alternatives that could avoid or substantially lessen that significant cancer risk.

SUNNYVALE DECISION DOES NOT PRECLUDE A REALISTIC ANALYSIS

The DEIR takes the position that its approach is required by *Sunnyvale West Neighborhood Association v. City of Sunnyvale* (2010) 190 Cal. App. 4th 1351 *("Sunnyvale").* Section ES 8.1, p. ES-85. We disagree. In that case, the court reasoned: "The statute requires the impact of any proposed project to be evaluated against a baseline of existing environmental conditions…which is the *only way to identify the environmental effects specific to the project alone." Id* at 1380 (emphasis added). Therefore, the court concluded that the CEQA document improperly evaluated only the "incremental change in these conditions due to the project against the *already worse* traffic environment of the future." *Id.* at 1387 (emphasis added). In contrast, in this case the environment is expected to improve in the future, not get worse, so the rationale of *Sunnyvale* does not apply.

A leading treatise discusses the CEQA Guidelines' conclusion that the baseline is "normally" present conditions, stating that "by using the word 'normally' the Resources Agency has implicitly recognized that at least in some circumstances a 'past' or 'future' baseline might be appropriate." Michael H. Remy, et al. "Guide to CEQA (California Environmental Quality Act)" (11th Ed. 2007) p. 199. Later, that treatise states "where a proposed policy change would require the agency or the public to forego a substantial environmental benefit that otherwise would occur, the action should be treated as causing a significant effect." Id. p. 209. In this case, the alternative baseline approach makes it clear that the project results in foregoing an

[2] SCAQMD staff does not have sufficient information to determine whether it concurs that the 17 in a million result is the correct result, but at minimum it illustrates that using a more realistic baseline demonstrates significant cancer risk impacts.

incremental benefit, estimated by the part as 17 in a million cancer risk, which exceeds significant thresholds and thus should be considered significant. To the extent that the *Sunnyvale* court used language implying that a future or realistic baseline could never be appropriate, that language is dicta. The court was simply not confronted with the situation where future conditions without the project will be better than present conditions rather than worse. In such a case, looking *only* at a comparison of year 2005 emissions to future emissions with the project artificially makes it appear that the project actually provides an emissions benefit, which is not correct. This approach fails to identify "the environmental effects specific to the project alone," which is the objective of the *Sunnyvale* court. It would be perverse indeed to conclude that *Sunnyvale* precludes the lead agency from determining that impacts are significant when the project concededly has a cancer impact of 17 in a million more than conditions without the project. The *Sunnyvale* court was concerned with a case where the lead agency used a baseline other than existing conditions in order to minimize project impacts. The opposite result occurs in this case. The "existing conditions" baseline actually minimizes impacts – in fact erroneously concludes that the project reduces risk. Were a court confronted with the facts of this case, we believe it would conclude that an alternative which looks at a realistic baseline is not only appropriate but required under CEQA.

If the Port continues to believe that *Sunnyvale* always requires a comparison of future impacts with the existing (2005) environmental conditions, one way to satisfy this concern is to do both analyses, but consider the impacts significant *if they are significant under either analysis*. That way, the Port has complied with its view of *Sunnyvale*, yet has also provided a realistic analysis and will require all feasible mitigation measures and consideration of a range of reasonable alternatives.

Accordingly, CEQA requires the Port to analyze health impacts and emissions impacts using a realistic baseline, and to evaluate alternatives and mitigation measures to address significant impacts identified under this approach.

Should you have any questions or wish to discuss this issue, please contact me at (909) 396-2302 or bbaird@aqmd.gov.

Sincerely,

Barbara Baird

Barbara Baird
District Counsel

BB:pa
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cc: Barry R. Wallerstein, D.Env., Executive Officer

ATTACHMENT D

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January 19, 2012

via electronic-mail and U.S. Mail

Mr. Christopher Cannon
Director of Environmental Management
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731

Re: Draft Environmental Impact Report: Southern California International Gateway

Dear Mr. Cannon:

On November 30, 2011, this office filed comments on the Draft EIR for the Southern California International Gateway, specifically addressing our concern that the document fails to adequately identify significant adverse environmental impacts of the project because it does not use a realistic baseline for analysis. As explained in the DEIR, the Port apparently believes it is foreclosed from using a realistic baseline against which to measure adverse impacts by the court decision in *Sunnyvale West Neighborhood Association v. City of Sunnyvale* (2010) 190 Cal. App. 4th 1351 *("Sunnyvale West")*. See Section ES 8.1, p. ES-85.[1] We wish to bring to your attention a subsequent case which makes clear the fact that the *Sunnyvale West* case should not be interpreted as preventing the Port from analyzing the significant impacts of the project using a realistic baseline.

As a reminder, we had pointed out that the DEIR includes an "alternative" analysis in the health impact section which conceded that the project increases cancer risk beyond what would occur without the project by 17 in a million, yet concludes this impact is not significant, even though the Port's significance threshold is 10 in a million. The rationale was that CEQA only allows a significant impact to be measured against a baseline of conditions in the year the NOP was issued (2005 in this case). Compared to conditions in 2005, the risk imposed by the project when it is fully operational will be smaller - but it would be even smaller without the project. Thus the DEIR obscures the significant impact of the project, which is an increase in risk of 17 in a million.

[1] Our previous letter referred to this case as *"Sunnyvale"* but in view of the potential for confusion resulting from the need to discuss a later case also involving the City of Sunnyvale, we now refer to this case as *"Sunnyvale West."*

A recent case decided by the same court that decided *Sunnyvale West* makes clear that an EIR may properly evaluate a project's impact by comparing the project with conditions in the future without the project. In *Pfeiffer v. City of Sunnyvale,* 200 Cal. App. 4th 1552 (2011), the court of appeal pointed out that *Sunnyvale West* "acknowledged" that "future conditions may be considered in determining a proposed project's impact on the environment." *Pfeiffer,* 200 Cal. App. 4th at 1573. The court further explained that *Sunnyvale West* had pointed out that discussion of "foreseeable changes and expected future conditions" in fact "may be necessary to an intelligent understanding of a project's impacts over time and full compliance with CEQA." *Pfeiffer, Id., quoting Sunnyvale West,* 190 Cal. App. 4th at 1381. The court emphasized that the CEQA document must give "due consideration to both the short-term and long-term effects. CEQA Guidelines §15126.2(a)." *Pfeiffer, Id.* at 1573. Finally, the court drew an analogy to the CEQA Guidelines applicable when a proposed project is compared with an adopted plan, in which case the analysis shall examine existing physical conditions at the time of the NOP *"as well as the potential future conditions discussed in the plan.* CEQA Guidelines §15125(e)." *Pfeiffer,* 200 Cal. App. 4th at 1574, *quoting Sunnyvale West,* 190 Cal. App. 4th at 1381 (emphasis by court of appeal). Accordingly, the *Pfeiffer* court made clear that a lead agency may measure significant impacts against a "future baseline," at least where the CEQA analysis also "included existing conditions…in its analysis of traffic impacts." *Pfeiffer,* 200 Cal. App. 4th at 1572.[2]

As noted in our earlier comments, we believe that CEQA not only allows but actually *requires* a determination of significant impacts that does not inaccurately credit the project with unrelated improvements in air quality that will occur anyway, and would be even greater without the project. The DEIR concludes that the "CEQA increment" for health risks (likelihood of contracting cancer) is a negative 160 in a million (based on comparing 2005 conditions without the project to future conditions with the project). This comparison improperly credits the project with the large improvements in air quality that will happen anyway, due to adopted rules, and that would be even greater without the project. The DEIR's determination of insignificance cannot be supported in this case, because it fails to identify the adverse impacts *"caused by the project."* CEQA Guidelines § 15064(d). Moreover, this error has real-world results, since it means that the DEIR fails to examine, and the lead agency will likely fail to require, feasible mitigation measures or alternatives that could substantially avoid or lessen the significant adverse impacts caused by the project, including a significant increase in cancer risk.

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[2] Another case has relied on *Sunnyvale West* to invalidate a CEQA analysis where it was not clear what baseline was used. *Madera Oversight Coalition, Inc., v. County of Madera,* 199 Cal. App. 4th 48 (2011). That case is not relevant here, however, because it appears that traffic conditions with the project (1,121 vehicles) may have been compared to future traffic conditions under full build-out rather than against existing undeveloped conditions (9 vehicles). *Id.* at 82. Thus, like *Sunnyvale West* itself, this case did not present the situation we have here, where future conditions will actually be better than existing conditions (cleaner air). In the case of SCIG, the comparison with existing conditions makes it artificially appear that the project makes the air cleaner, whereas it actually makes the air dirtier than it would be without the project.

Mr. Christopher Cannon
January 19, 2012
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We reiterate our request from our previous letter. If the Port continues to believe that *Sunnyvale West* always requires a comparison of future impacts with existing (2005) impacts, even where the project makes future conditions worse than they would otherwise be, the Port should prepare an analysis using a realistic baseline as well as one using the 2005 baseline. The Port must then consider the project impacts to be significant *if they are significant under either analysis.* This way, the Port can comply with its view of the *Sunnyvale West* case, yet also provide a realistic analysis of significant impacts, and must then require all feasible mitigation measures and consideration of a range of reasonable alternatives.

Should you have any questions or wish to discuss this issue, please contact me at (909)396-2302 or bbaird@aqmd.gov.

Sincerely,

Barbara Baird

Barbara Baird, District Counsel

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cc: Barry R. Wallerstein, D. Env., Executive Officer