



South Coast Air Quality Management District
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April 4, 2013

Via Email and Hand Delivery

Los Angeles City Council
c/o City Clerk
200 N. Spring Street, Room 395
Los Angeles, CA 90012

Re: Appeal from March 7, 2013 decision of the Port of Los Angeles-Board of Harbor Commissioners to approve the Final Environmental Impact Report for the Southern California International Gateway Project and associated approvals (ADP No. 041027-199/SCH No. 2005091116)

Dear Members of the City Council:

The South Coast Air Quality Management District (SCAQMD) is writing to appeal the March 7, 2013 decision of the Los Angeles Board of Harbor Commissioners to approve the Final Environmental Impact Report for the Southern California International Gateway (SCIG) project and any associated approvals, including, but not limited to, the Findings of Fact, the Statement of Overriding Considerations, and the Mitigation Monitoring and Reporting Program. This appeal is made pursuant to Public Resources Code section 21151(c).

This appeal is based on all prior comments submitted by the SCAQMD and others, both orally and in writing, during all phases of project approval. Specifically, the SCAQMD incorporates by reference the CEQA deficiencies we identified in our previous comment letters dated December 15, 2005, November 30, 2011, January 19, 2012, February 1, 2012, February 14, 2012, November 14, 2012, March 6, 2013, and March 20, 2013, attached hereto as Attachments A through H and incorporated herein by reference, and in our oral comments provided October 6, 2005, October 13, 2005, November 10, 2011, November 16, 2011, October 18, 2012, March 7, 2013, and March 21, 2013. While we maintain our original concerns, we are principally concerned that, in approving the project, the Harbor Commission failed to adequately identify the magnitude of the air quality impacts associated with the project, and failed to properly reduce those impacts by adopting all feasible mitigation measures as enforceable measures, or by adopting feasible project alternatives.

Proper identification of the project's air quality impacts and their mitigation is especially important given the location and size of the project and the nature of the surrounding land

uses. The SCIG facility will be constructed near a large residential community and less than 600 feet from:

- Cabrillo High School
- Hudson K-8 School
- Bethune School for homeless children
- Comprehensive Child Development daycare center
- Veterans Affairs Villages at Cabrillo Clinic (VA Clinic)- the largest transitional housing facility for homeless veterans in the nation
- Hudson Park

In addition, due to the length and location of the facility, locomotives will move and idle as close as 20 feet from the playing field of Stephens Middle School and homes in the West Long Beach Community, and all trucks entering SCIG will travel within 150 feet of the VA Clinic. This means that each year, 2,880 locomotives and 2 million truck trips will travel next to these sensitive receptors. These locomotives and trucks will be the two largest sources of air pollution from the project.

These proximity concerns have real world impacts. As a result of this project, people in West Long Beach -- with an affected population of about 36,000 -- will breathe air that exceeds the 1-hour Nitrogen Dioxide (NO₂) National Ambient Air Quality Standard (NAAQS), a health-based standard. For those sensitive receptors (schools, residences) listed above that are closest to the facility, NO₂ concentrations will be almost double the 1-hour NAAQS. Exposure to this pollutant is linked to airway inflammation in healthy people, respiratory symptoms in people with asthma, emergency room visits and hospital admissions. Children and the elderly, both highly represented in the impacted community, are particularly susceptible. In fact, these sensitive receptors are among some of the region's most vulnerable, representing already highly-impacted, low-income, and minority populations. For this reason, the approval of this project in this location is a serious environmental justice issue, and the SCAQMD has repeatedly stated that the community must be protected from the significant air quality impacts associated with the project through adequate mitigation or adoption of project alternatives.

In previously submitted comment letters, SCAQMD identified our concerns about the adequacy of the quantification and the methodology used to determine project impacts, including baseline assumptions. Based on the limited data available, it appears that, in at least some cases, air quality impacts of the proposed rail yard are underestimated, while impacts of the no-project alternative are overstated. This calls into question the validity of the entire air quality and health risk analysis. SCAQMD requested additional data needed to allow sufficient evaluation of the EIR analysis, but the Port of Los Angeles has not provided all data needed. The CEQA document, as approved, remains inadequate to

allow the public to provide informed comment and thus must be revised and recirculated. (CEQA Guidelines § 15088.5(a)(4)) In addition, the available data leads us to believe that a proper analysis would have identified that the project will result in an exceedance of significance thresholds for the daily emission of criteria pollutants, creating further impacts requiring mitigation.

The Port's EIR acknowledges the project will exceed the SCAQMD's threshold concentrations for 1-hour and annual NO₂, 24-hour and annual PM₁₀, 24-hour PM_{2.5}, and the health-based NAAQS for 1-hour NO₂ exposure. This acknowledgment creates a legal obligation to mitigate or substantially lessen the impacts with all feasible mitigation measures or project alternatives. In spite of this acknowledged impact, however, the Findings of Fact and Statement of Overriding Considerations do not identify a single mitigation measure or alternative to reduce NO₂ impacts and instead claim such measures are infeasible. The SCAQMD strongly disagrees with this assertion.

First, contrary to a key assertion in the EIR, the proper legal standard for feasibility of a mitigation measure is not whether the measure is capable of being carried out today, but instead whether the measure is capable of being carried out in a reasonable period of time. (Guidelines § 15364.) This is a long-term project with a permit that allows BNSF to operate for 45-years, not including the project's 5-year construction phase. Without a doubt, there are a number of technologies, including zero-emission trucks and Tier 4 locomotives, which are feasible during the life of the project, some even prior to project operation. The EIR needs to require implementation of such measures through enforceable conditions in the project approval.

Regarding trucks, the SCAQMD and others have submitted comments and evidence showing that deployment of zero-emission trucks to move all containers between the railyard and the ports can be feasibly implemented by 2020. This evidence is based on SCAQMD's extensive experience with the need to advance clean technologies, and the agency's ongoing collaborative projects with technology developers specific to zero-emission trucks. Substantial zero-emission truck technology development efforts have already been completed so that initial deployment is feasible well before 2020. The EIR, however, finds that adopting a requirement for zero-emission trucks as part of the project approval is infeasible because the technologies have not been fully demonstrated *today*. As noted above, this finding is based on an incorrect interpretation of CEQA. In addition, Project Condition AQ-11 falls short of what is needed to assure deployment of zero-emission trucks. The measure merely creates a process for technology evaluation, provides for some demonstration, and authorizes—but does not mandate—the lead agency to require zero-emission trucks at some time in the future. The measure establishes no deadline for deployment, not even a deadline with a possibility of time extension. In short, the measure provides no assurance that zero-emission trucks will

ever be required. Furthermore, this project condition should be incorporated into the project approval as a mitigation measure.

Regarding locomotives, Project Condition AQ-12, which purports to be based on San Pedro Bay Ports Clean Air Action Plan (CAAP) Measure RL-3, is inadequate because it merely outlines the measure identified in the CAAP but fails to actually require SCIG to implement the measure. This means that the measure is entirely unenforceable. This is a serious concern because the lease may be the clearest opportunity to require cleaner locomotives. The EIR acknowledges that Tier 4 line-haul locomotives must, under federal law, be introduced by 2015 (before commencement of SCIG project operation). RL-3 established a “minimum requirement” for new railyard projects like SCIG of 50% Tier 4 locomotives *on port properties* by 2023, with a goal of 95% Tier 4 locomotives by 2020. Given its significant air quality impacts, the project must include a mitigation measure to achieve the RL-3 goal of 95% Tier 4’s by 2020 at SCIG. As is explained in our comment letters, requiring routing of Tier 4 locomotives to SCIG is clearly a feasible mitigation measure. Furthermore, contrary to Measure RL-3, PC AQ-12 fails to require routing of Tier 4 locomotives to SCIG and instead allows emission reductions anywhere in the South Coast Air Basin through alternate means. This is ineffective to address the project’s acknowledged localized significant air quality impacts in West Long Beach. Also, the suggestion that there are alternate means to reduce emissions indicates that the Port has identified the existence of additional mitigation measures that should be required of the project.

In addition to requiring Tier 4 locomotives and zero-emission trucks, the project approval can and must provide a framework that would ensure the Port can require the project to implement new lower emissions measures as they become available. (*Sacramento Old City Association v. City Council of Sacramento* (1991) 229 Cal.App.3d 1011, 1028-29.) Emission control technologies are constantly improving, and given the long life of this project and the unmitigated significant impacts, it is important that the project be required to implement them when they become feasible. These could include, for example, the zero-emission cargo handling and rail technologies referenced in — but not required to be implemented by — project condition PC AQ-11. Some of these technologies are already being demonstrated. Mitigation Measure AQ-9, Periodic Review of New Technology and Regulations, is legally and substantively inadequate to ensure implementation of new technologies and actual mitigation of project impacts. This measure only applies in limited circumstances that are unlikely to occur, namely, (1) at the time of a lease amendment or facility modification—neither of which is a foreseeable event, or (2) if BNSF and the Port are able to reach a “mutual agreement on operational feasibility and cost sharing.” Because of these qualifications, the lead agency has no authority to, absent agreement or action by BNSF, require cleaner technologies when the port determines they are feasible.

Perhaps in admission that the above measures and project conditions MMAQ-9, PCAQ-11 and PCAQ-12 do not assure any emissions reductions, the EIR does not quantify any NO₂ benefits associated with them or take credit for them in the Findings of Fact and Statement of Overriding Considerations. But, as identified, feasible mitigation measures do exist and the port has inappropriately dismissed incorporating feasible mitigation measures for the significant NO₂ impacts of the project. However, CEQA does not allow an agency to jump from a finding of significance to a Statement of Overriding Considerations without first requiring the implementation of all feasible mitigation measures or project alternatives, and therefore the approval is improper.

Based on the above, the Port's inability to identify a single mitigation measure to reduce significant NO₂ impacts is inexplicable. The determination that the above-described measures are infeasible is legally and substantively incorrect. We urge the City Council to send this project approval back to the Port to reexamine in good faith the project impacts and the potential to mitigate those impacts or identify project alternatives. Placing the nation's largest rail yard next to so many school children and homes should require thorough consideration of every possible feasible mitigation measure and project alternative. We hope to work with the City and the Port to address this important issue and come to a satisfactory resolution.

Sincerely,



Barry R. Wallerstein, D.Env.
Executive Officer

Enclosures

BW:PG:BB:VT



South Coast Air Quality Management District

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December 15, 2005

Dr. Ralph G. Appy
Director of Environmental Management
Los Angeles Harbor Department
425 South Palos Verdes Street
P.O. Box 151
San Pedro, CA 90733-0151

Dear Dr. Appy:

Notice of Preparation of a Draft Environmental Impact Report for Southern California International Gateway

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The SCAQMD staff understands the importance of efficient port activity and goods movement. However, the proposed scope and location of the Southern California International Gateway (SCIG) project should not be assumed acceptable since it has the clear potential to significantly impact local and regional air quality. The location of this project is in a non-attainment area, adjacent to already-impacted residential communities that have raised environmental justice concerns, and in close proximity to several schools. Thus a thorough assessment of environmental and public health impacts is needed. In addition, in order to comply with CEQA, the port must apply its creative energies to identify emission control measures and project alternatives—including alternative sites and the no project alternative—to mitigate significant adverse impacts identified through the impact analysis.

We submit the following comments regarding the analysis of potential air quality impacts, mitigation measures and project alternatives that must be included in the Draft Environmental Impact Report (DEIR):

Characterization of Emissions. The EIR must thoroughly characterize the types of air contaminants that will be emitted from equipment, and their health and environmental impacts. Of particular concern, the project will result in emission of diesel particulate matter, a complex mixture of gases and fine particles that contains many carcinogenic compounds, including arsenic, benzene, formaldehyde, 1-3-butadiene, and ethylene dibromide.¹ In 1998, the California Air Resources Board (CARB) identified diesel

¹California Environmental Protection Agency, Air Resources Board and Office of Environmental Health Hazard Assessment, 1998 Executive Summary for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant."

exhaust as a Toxic Air Contaminant (TAC) based on its cancer causing potential. The lead agency must conduct a thorough health risk assessment to quantify the potential health risks from sources associated with the proposed project and its alternatives, including alternative sites (discussed below).

Project Location, Objectives and Alternatives Analysis. The SCAQMD is concerned about the site selected for the proposed SCIG project. The community adjacent to the Terminal Island Freeway is already heavily impacted by neighboring refineries, diesel truck traffic on the Terminal Island Freeway, and the intermodal facility north of the proposed SCIG project. The SCAQMD has examined elemental carbon contained in the inhalable particulate fraction (PM10) in the Long Beach and Wilmington area. Based on SCAQMD sampling data, average elemental carbon at Hudson Elementary School (7.0 ug/m³) was 59 percent higher² than any other study sites evaluated in the Long Beach and Wilmington area. Hudson Elementary School is within a quarter-mile from the project site and would likely be significantly impacted. The environmental analysis should thoroughly consider effects on this sensitive receptor, and among others.

The SCAQMD is pleased that the lead agency has added Alternative #3: Alternative Site Location. The SCAQMD staff is concerned, however, that the proposed SCIG project objective still includes construction of a “near-dock” intermodal rail facility. Such a foregone conclusion or objective should not be reached at this stage of the environmental review process. It is essential that this statement of project objectives not constrain consideration of alternative sites. As required in the CEQA Guidelines, the lead agency must thoroughly consider alternative site locations that will result in reduced public health impacts to residences and sensitive receptors. “The discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” CEQA Guidelines §15126.6(b) (emphasis added). Due to the magnitude of the proposed rail project and proximity to sensitive receptors, the SCAQMD believes that the lead agency must consider an on-dock or on-port alternative that could minimize diesel truck emissions and localized impacts to residences and sensitive receptors. An on-dock or on-port facility is also potentially more efficient as cargo is loaded from the ships more directly to the trains, eliminating many heavy-heavy duty diesel truck trips.

The Draft EIR must thoroughly analyze the ability to alter historical operating practices, land use agreements and any other impediments to implementation of an on-dock or on port alternative before rejecting such a possibility as infeasible. While CEQA Guidelines list a number of factors, which may be considered in determining the feasibility of an alternative, “no one of these factors establishes a fixed limit on the scope of reasonable alternatives.” CEQA Guidelines §15126.6(f)(1). The fact that an alternative may even require legislative change does not necessarily make it infeasible. Citizens of Goleta Valley v. Board of Supervisors (1990) 52 Cal3d 553, 573. Thus, the fact that an alternative may require changes to the project, changes to port operations such as leases, or impede some project objectives, does not make it infeasible.

South Coast Air Quality Management District Monitoring Analysis Rule 1158 Follow-up Study #11, October 2005.

Mitigation of Emissions from Line Haul Locomotives. The proposed project lacks sufficient mechanisms to minimize diesel particulate emissions from line-haul locomotives. The CARB railroad MOUs and recently approved regulation for Cargo Handling Equipment at Ports and Intermodal Rail Yards also will not adequately address public health and air quality impacts. Line haul locomotives will clearly cause significant emissions impacts, yet the NOP identifies no mitigation measures or alternatives to be analyzed to mitigate these impacts. The Port of Los Angeles No Net Increase report included measures directed to the line haul locomotives that must be included in the EIR and implemented as feasible measures to mitigate identified significant impacts. “An EIR shall describe feasible mitigation measures which could minimize significant adverse impacts.” (CEQA Guidelines §15126.4(a)(1).) These measures, at a minimum, should be included as required mitigation in the Draft EIR. “(A)n adequate EIR must respond to specific suggestions for mitigating a significant environmental impact unless the suggested mitigation is facially infeasible.” Los Angeles Unified School District v. City of Los Angeles (1997) 58 Cal.App.4th 1019, 1029.

Proposed Emissions Control Strategies Identified in NOP. The SCAQMD staff commends BNSF Railway and the lead agency for their initial plans to incorporate alternatives to diesel-powered railroad switch engines and yard hostling trucks, electric cranes, and plans to evaluate alternative non-diesel delivery systems for containers. However substantial uncertainties regarding the scope of these plans remain, that must be better defined. The project proponent apparently is still evaluating the feasibility of alternative technologies, and the proposed project thus lacks commitment to implement them. In addition, it is unclear in the NOP which cranes will be electric, or whether other cargo handling equipment such as sideloaders, chassis stackers, etc. will be electric.

The Draft EIR must definitively specify where alternative technologies will be used throughout the project, and quantify the potential emissions impact associated with their use. In addition, the Draft EIR must quantify emissions associated with all equipment associated with the proposed project such as rail maintenance of way equipment (anchors, ballast regulators, ballast sweepers, compactors, locomotive cranes, spike reclaimers, etc.), hy-rail trucks or other rail-related equipment. Agencies may not defer the formulation of mitigation measures until some future time. (CEQA Guidelines §15126.4(a)(1)(B); Sundstrom v. County of Mendocino (1988) 202 Cal.App.3rd 296, 308-309.

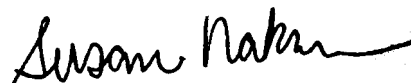
In short, the project must use the cleanest technologies feasible for *all* equipment in order to mitigate identified significant impacts. To the extent that low emitting technologies may not be immediately feasible, the project approval must include enforceable commitments and schedules to implement such technologies when they become feasible, as necessary to mitigate identified significant adverse effects. “Mitigation measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments.” CEQA Guidelines §15126.4(a)(2).

Buffer zones, Grade Separations, etc. A full review of alternative sites and consideration of the no project alternative must occur prior to proceeding with the proposed project. If BNSF Railway continues to pursue the currently proposed location, the revised NOP states that the lead agency will be assessing the feasibility of a new grade separation from the Terminal Island Freeway directly into the proposed SCIG site. Although this approach may reduce localized impacts to those residents adjacent to the Terminal Island Freeway from trucks, impacts from the trucks, locomotives, and intermodal equipment within the proposed SCIG site will continue to impact an already impacted area. The SCAQMD staff recommends that the lead agency design the project to minimize exposure of all emissions to residents and sensitive receptors by locating truck entrances and exits away from receptors, building a buffer zone to protect sensitive receptors, locating fueling stations and service and maintenance areas away from receptors, and any other design features to minimize exposure of emissions to receptors. In addition, the grade separation may enable an increase in traffic onto the site. These impacts should be analyzed and mitigated, if impacts are significant. CEQA Guidelines §15126.4(a)(1)(D).

Additional comments relating to air quality analyses, data sources and mitigation guidance are included in Attachment I.

The SCAQMD staff appreciates the opportunity to comment on this project. Please send the SCAQMD a copy of the Draft EIR upon its completion. In addition, please 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. The SCAQMD staff plans on commenting on the Draft EIR, including selection of the most appropriate of the project alternatives contained in the analysis. If you have any questions, please call me at (909) 396-3105.

Sincerely,



Susan Nakamura
Planning Manager

BRW:PG:EC:SN:CB

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Attachment I

The SCAQMD staff recommends that the lead agency follow the procedures, guidelines and methodologies described below to assess potential air quality and health impacts from the proposed project.

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. Alternatively, lead agency may wish to consider using the California Air Resources Board (CARB) approved URBEMIS 2002 Model. This model is available on the SCAQMD Website at: www.aqmd.gov/ceqa/models.html.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction and operations should be calculated. Construction-related air quality impacts for this type of project will typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment), equipment to build the rail line, and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, locomotive emissions, intermodal equipment, emissions from stationary sources (e.g., generators, boilers, internal combustion engines), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust) including delivery trucks.

CEQA Guidelines Sections 15130 and 15355 require lead agencies to evaluate cumulative impacts, i.e., emissions from the proposed project as well as those from existing or approved projects in the immediate vicinity of the proposed project.

Consistent with the SCAQMD's environmental justice enhancement I-4, in October 2003, the SCAQMD Governing Board adopted a methodology for calculating localized air quality impacts and localized significance thresholds (LSTs). LSTs can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized significance analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at <http://www.aqmd.gov/ceqa/handbook/LST/LST.html>.

Regarding health risk assessment, SCAQMD staff has developed guidelines for estimating emissions from railyards and for conducting health risk assessments as part of the Rule 3503 – Emissions Inventory and Health Risk Assessments for Railyards. SCAQMD staff recommends that the lead agency utilize these guidance documents when estimating the health risks from the proposed project. In addition, the SCAQMD staff recommends that the lead agency refer to the SCAQMD’s “Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis” which can be found on the SCAQMD’s CEQA webpages at the following internet address:

http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

Since the proposed project is expected to generate significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additionally, SCAQMD’s Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD’s Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address:

<http://www.aqmd.gov/prdas/aqguide/aqguide.html>. Additional mitigation measures for emissions from railyards and delivery trucks can be found in:

- SCAQMD’s “Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis”
- Riverside Air Quality Task Force “Good Neighbor Guidelines”
- Report to Mayor Hahn and Councilwoman Hahn by the No Net Increase Task Force, June 24, 2005.

Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD’s Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD’s World Wide Web Homepage (<http://www.aqmd.gov>).



South Coast Air Quality Management District

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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.

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.

Mr. Christopher Cannon

November 30, 2011

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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
District Counsel

BB:pa

e:\share\barbara\railroads\scig baseline comments.doc

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



South Coast Air Quality Management District

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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.

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, District Counsel

BB/pa

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



South Coast Air Quality Management District
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(909) 396-2000 • www.aqmd.gov

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 residents¹ 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 site². 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 PM_{2.5} 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,

A handwritten signature in black ink that reads "Susan Nakamura". The signature is written in a cursive style with a long, sweeping tail on the final letter.

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 be 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 residents⁴ 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 site⁵. 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 NO₂ and PM₁₀. As depicted in Figure 2 below, NO₂ is expected to exceed federal standards over a wide area, including population centers in west Long Beach and Wilmington. Concentrations of NO₂ 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 NO₂ 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>

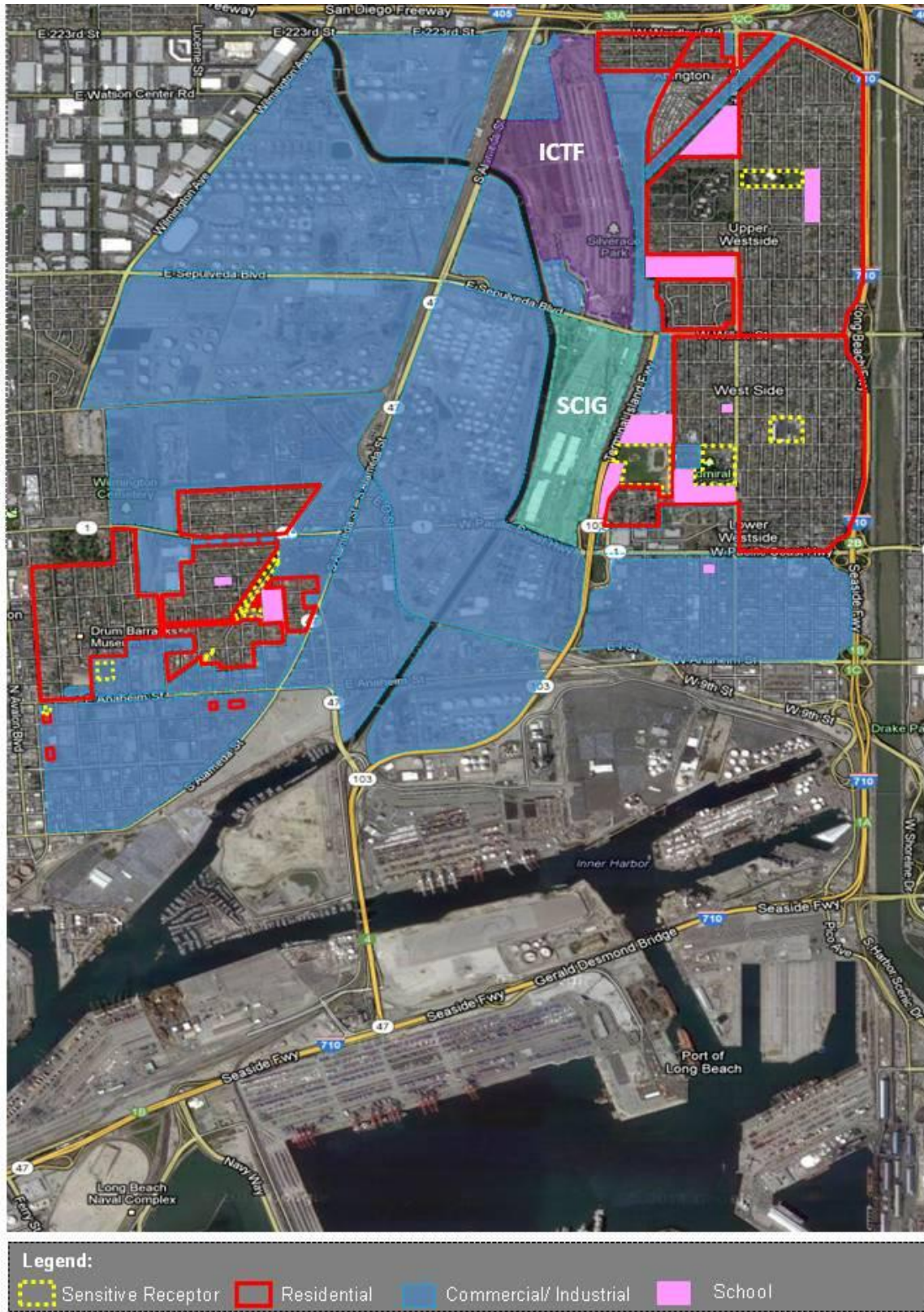


Figure 1: Surrounding Residential and Sensitive Land Uses Near Proposed SCIG Facility

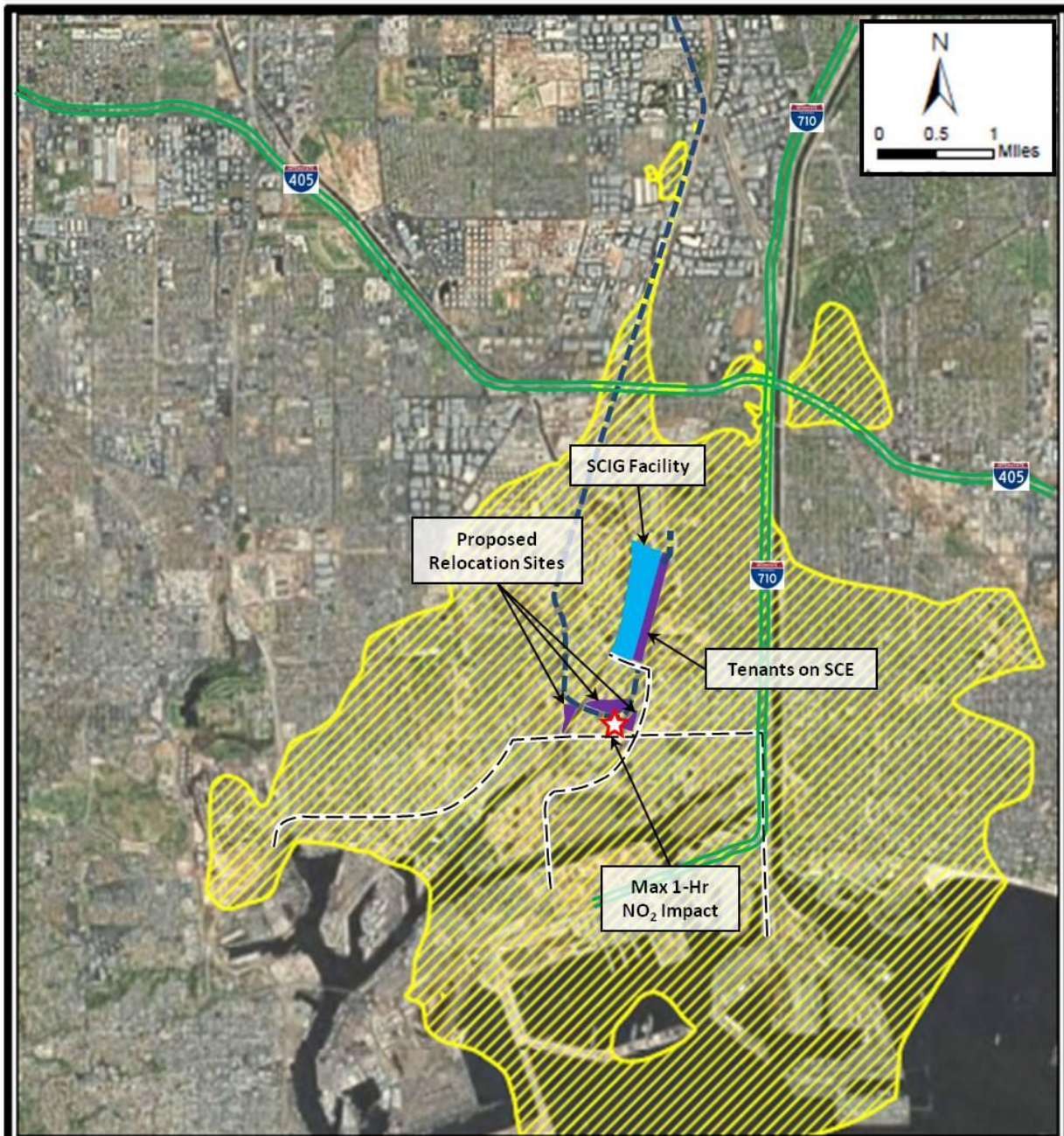


Figure
Ground-Level Concentration
1-Hour NO₂
Unmitigated Proposed Project
plus Background

Adapted from DEIR Figure C2.5-5

Legend

- Rail Lines used by SCIG trains
- Freeway
- Truck Route
- SCIG Facility
- ★ Max 1-Hr NO₂ Impact Location
- ▨ Exceeds 189 µg/m³ Significance Threshold

Figure 2: 1-Hour NO₂ Unmitigated Impacts

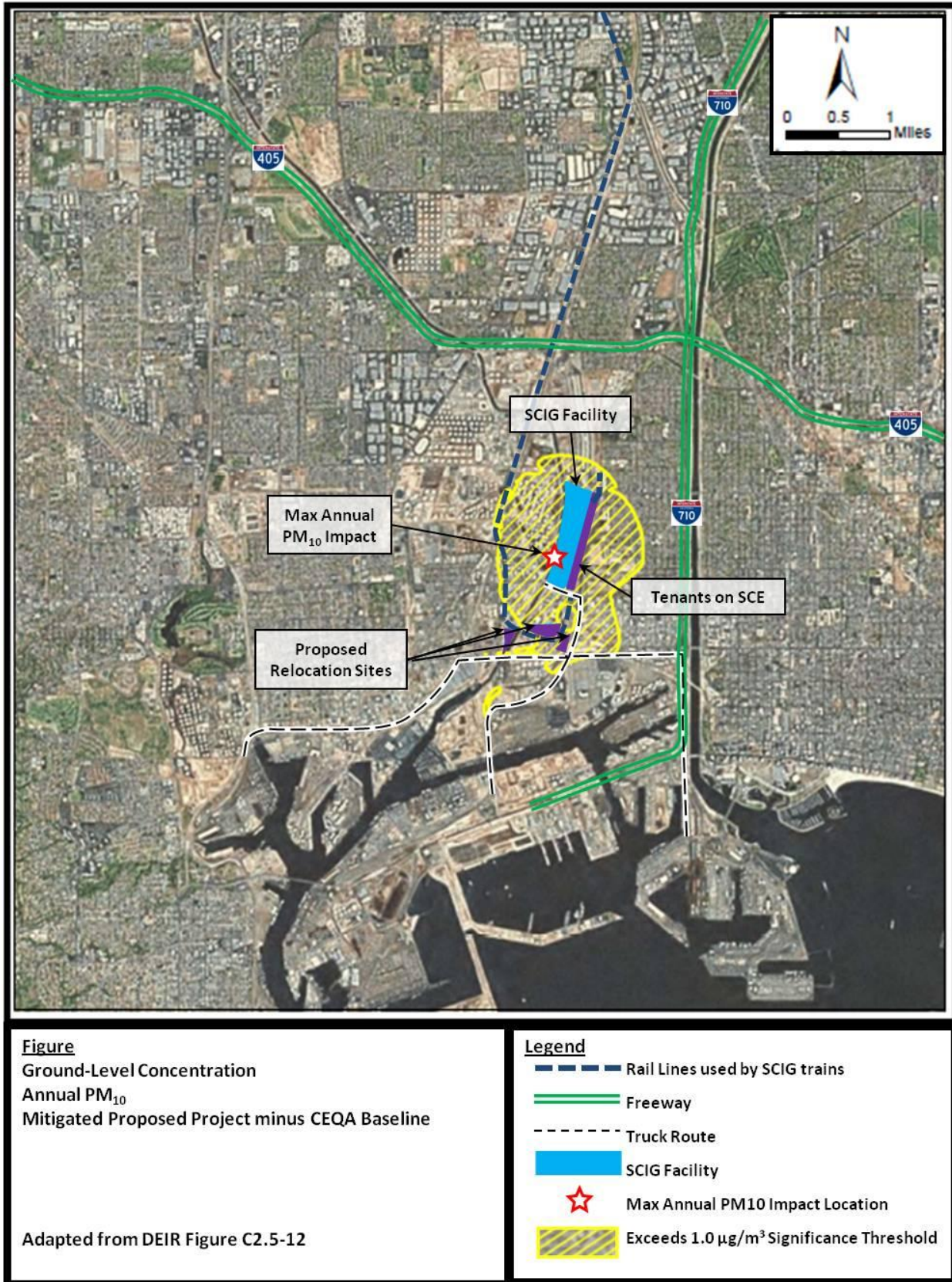


Figure 3: PM10 Unmitigated Impacts

Table 1

Pollutant	Predicted Concentration from Project Emissions ($\mu\text{g}/\text{m}^3$)	Threshold ($\mu\text{g}/\text{m}^3$)
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 NO₂ emissions at the point of maximum impact are the Tenant Onsite Trucks. The primary source of emissions at the point of maximum impact for PM₁₀ 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 NO₂ 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 NO₂ 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 NO₂ impacts, and the only mitigation for PM is street sweeping — which is not sufficient to fully mitigate this significant impact. Localized NO₂ 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 NO₂ 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 NO_x emissions (the cause of ambient NO₂), or other particulates. The measure thus does not necessarily address localized impacts from NO₂ 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 NO₂ and PM impacts, and AQMD technical staff does not expect they would. Ambient NO₂ concentrations result from NO_x emissions. NO_x 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 NO₂ impacts. Even the cleanest combustion engine technology will have associated local NO_x emissions impacts substantially above zero-emission technologies. Zero-emissions technologies thus must be included as mitigation measures for significant NO₂ 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 NO_x and PM₁₀ emissions and will further mitigate the significant localized impacts of NO₂ 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 standards 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 alternatives⁸ “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

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.

NO₂ and PM₁₀ Impacts

The NO₂ and PM₁₀ localized analysis does not provide a complete picture of the potential severity of NO₂ or PM₁₀ 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 NO₂ 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 NO₂ and PM concentrations vary within the areas significantly impacted.

NO₂ Sources

Based on data presented Table C.2.5-15 (reprinted in Table 3 below), the primary source of NO₂ emissions at the point of maximum impact are the Tenant Onsite Trucks. The primary source of emissions at the point of maximum impact for PM₁₀ 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 NO₂ 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	NO₂ 1-hour	PM₁₀ 24-hour	PM₁₀ 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.

NO₂ 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 NO_x 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 NO_x 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 NO_x 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 NO_x 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 Railyard¹⁰ 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 (ICTF) released in January 2009, indicated that the ICTF will also process 1.5 million lifts per year at its maximum operating capacity in 2023¹¹. 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 capacity⁵. 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

	SCIG¹	ICTF²
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 railyards¹² 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 reworded 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 technologies 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 “Tyranos” 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

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.

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.

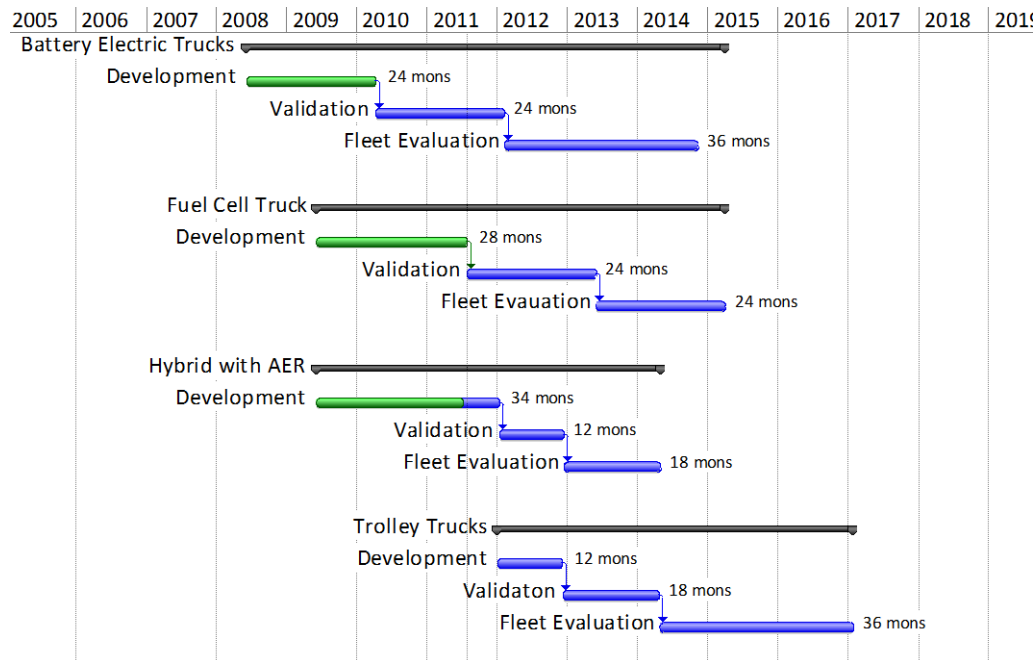


Figure 7: Commercialization Timelines For Zero Emission Truck Technologies

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

**South Coast
Air Quality Management District**

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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.

Mr. Christopher Cannon
November 30, 2011
Page 2

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.

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.

Mr. Christopher Cannon
November 30, 2011
Page 3

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

Mr. Christopher Cannon
November 30, 2011
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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.

Mr. Christopher Cannon
November 30, 2011
Page 5

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
District Counsel

BB:pa
e:\share\barbara\railroads\scig baseline comments.doc

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

ATTACHMENT D

**South Coast
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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*."

Mr. Christopher Cannon
January 19, 2012
Page 2

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.

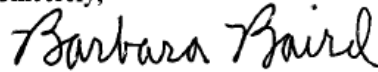
² Another case has relied on *Sunnyvale West* to invalidate a CEQA analysis where it was not clear what baseline was used. *Madera Oversight Coalition, Inc., v. County of Madera*, 199 Cal. App. 4th 48 (2011). That case is not relevant here, however, because it appears that traffic conditions with the 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, District Counsel

BB/pa

e:\share\barbara\railroads\scig baseline 2d set.doc

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



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

February 14, 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. The SCAQMD staff appreciates the additional time that the Port of Los Angeles has provided to review modeling files for the Proposed SCIG Project. As you are aware, the SCAQMD staff received the final set of modeling files on January 31, 2012. Due to the delay in transmitting files, the Lead Agency granted the SCAQMD staff two weeks (two weeks after the February 1, 2012 close of comments for the DEIR) to submit comments on the air dispersion modeling files. Air dispersion modeling for the proposed project was extensive and the 42 gigabytes of data provided to AQMD staff included 226 model input files, thousands of model output files, and 46 databases. The two week extension was not a sufficient amount of time to allow for a full review of the modeling files due to the complexity of the air dispersion modeling, the extent of the data, and the lack of documentation.

The SCAQMD staff requested to review the air dispersion modeling data to review the actual calculations and modeling used to support the significance determinations. The data that was sent to our agency was missing key pieces of information such as activity data to verify and/or recreate emissions calculations, pollutant concentrations, and verify air dispersion modeling results. In addition, emission rates could not be verified as emission rates in the modeling files were unitized (e.g., set to 1 gram per second per source) to allow the output files to be easily scaled up or down. It appears that the data that would identify how much the unitized emission factors were scaled up or down was not included in the data sent to the SCAQMD.

Figure 1 below presents a simplified flow chart describing the steps that are followed to convert emission factors into predicted pollutant concentrations using a dispersion model like AERMOD. As can be seen in the figure, critical data was not provided to AQMD staff or to the public. This data is necessary to confirm the validity of the results of the dispersion modeling analysis. A

specific example illustrating how the missing data precludes the ability to validate the results of the analysis is below.

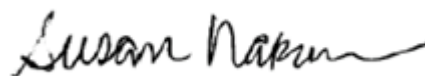
In the 'LHIDLE' (line haul locomotive idling) modeling input file, several point sources are located along the San Pedro Branch line north-northeast of the project site. These sources extend alongside Stephens Middle School and reach the southern end of the Windward Village Mobile Home Park. The 'unitary' emission rates for each of these sources varies from 2 grams per second up to 5 grams per second. The derivation of these emission rates is not presented in the Draft EIR or in the files provided separately to AQMD staff. The calculations that convert the source strength/pollutant concentration ratio to actual predicted concentrations are also not provided. Further, because the activity data (i.e., hours of idling per day) for locomotives idling on this section of the San Pedro Branch line is also not provided, AQMD staff cannot re-create the emission rates used in the modeling files. Without knowing the activity data for all of the thousands of sources in the analysis, it is impossible to determine if the modeled pollutant concentrations correspond to values presented in the Draft EIR.

Although emissions calculations used to conduct to air dispersion modeling could not be completely reviewed, the location of emission sources was available. There appears to be a disconnect between the text of the DEIR and the location of locomotives that were modeled for the proposed project. The DEIR shows (Figure 2) locomotive emissions along the San Pedro Branch Line would occur south of Stephens Middle School. In the modeling files (Figure 3) the locomotive emissions along the San Pedro Branch Line extend well north of Stephens Middle School near the residential community of West Long Beach. If the proposed project will result in locomotives operating on the northern portion of the San Pedro Branch Line, that should be appropriately reflected in the DEIR, such as in Figure 3.

Without the missing data and calculations, AQMD staff cannot verify criteria pollutant modeling and health risk assessment results in the DEIR. This type of data is regularly provided by all other lead agencies in our jurisdiction when requested, and has been provided by the Port of Los Angeles for other projects, including the APL Terminal project currently in its Draft EIR comment period. AQMD staff therefore requests that the full analysis be provided to the public with sufficient time to review prior to the lead agency approving the project.

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.

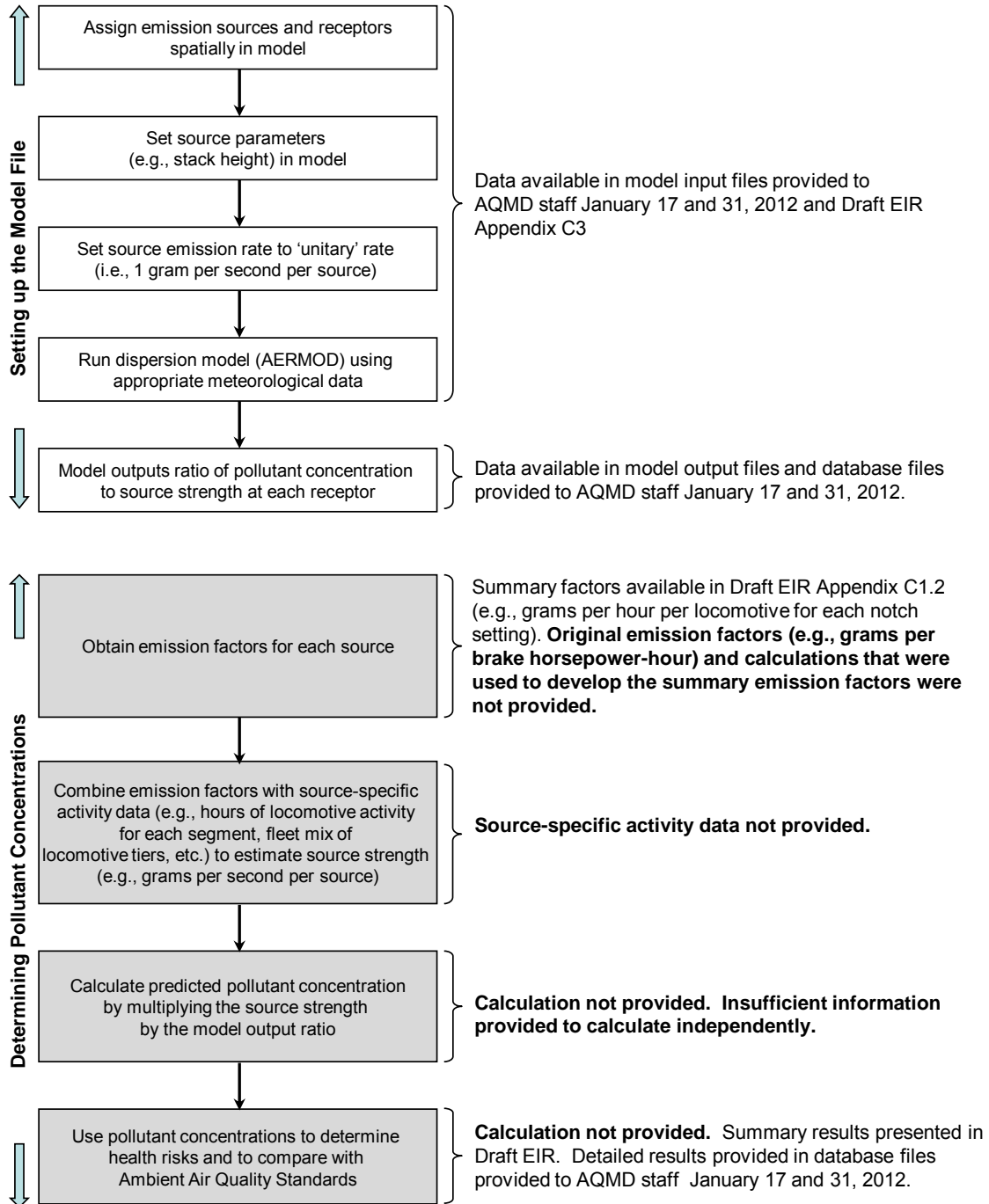
Sincerely,



Susan Nakamura
Planning Manager

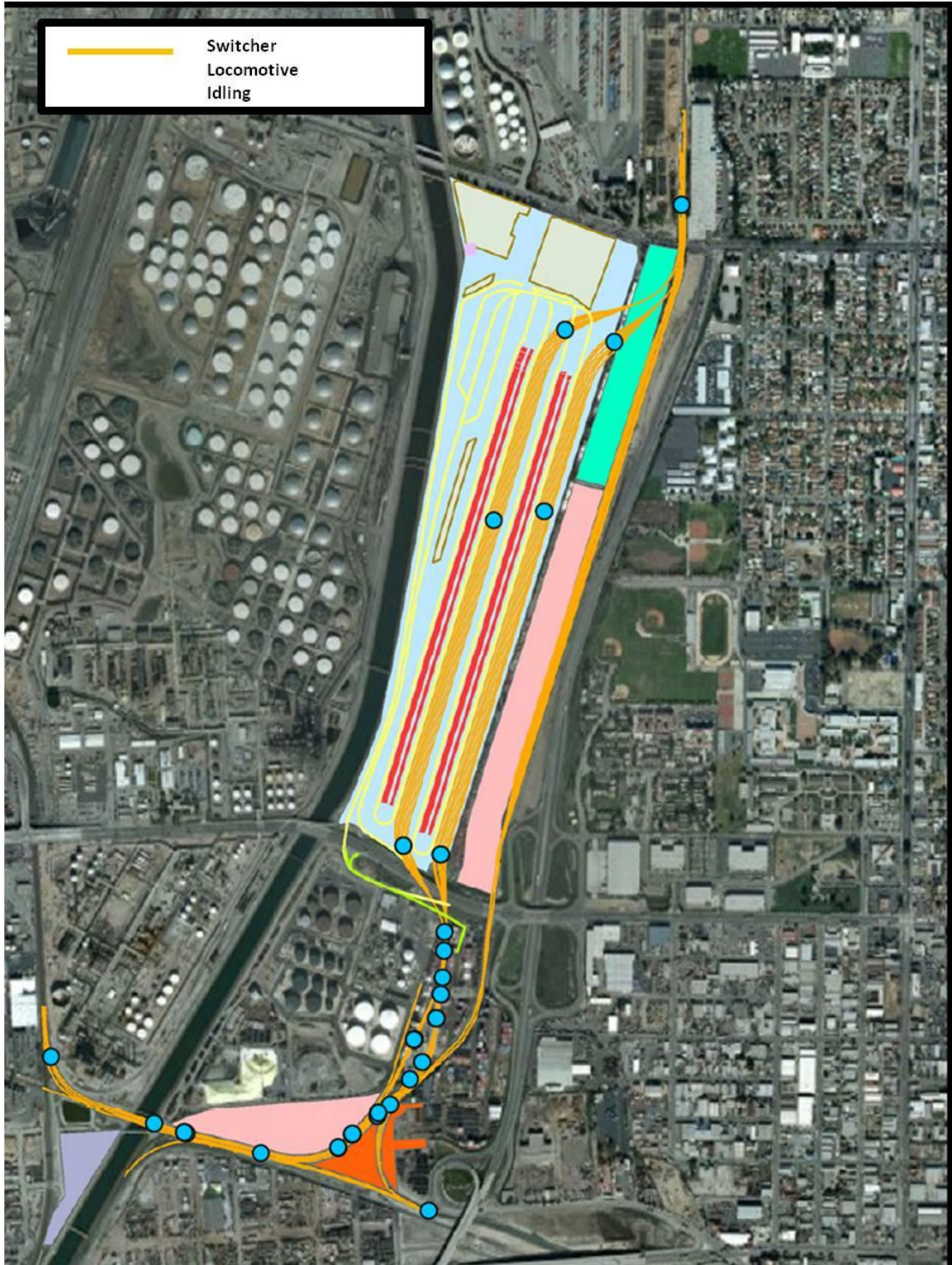
Attachments

Figure 1
Simplified Air Quality Dispersion Modeling Process Flowchart



Note: Shading indicates information not provided that is critical to calculating pollutant concentrations

Figure 2
Figure C3.4-2 from DEIR
(Legend Shows Only Switcher Locomotive Idling)





South Coast Air Quality Management District

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Via Email and U.S. Mail

November 14, 2012

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

Dear Mr. Cannon:

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

The South Coast Air Quality Management District (AQMD) staff appreciates the opportunity to comment on the Recirculated Draft Environmental Impact Report (Recirculated DEIR) for the Southern California International Gateway (SCIG) Project. We appreciate the one-day extension the Lead Agency provided to submit comments on the Recirculated DEIR. The AQMD staff previously submitted comments on the Draft Environmental Impact Report (DEIR) on February 1, 2012. 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.

The AQMD staff appreciates that the health risk assessment in the Recirculated DEIR uses a floating baseline, which is the appropriate baseline. The Recirculated DEIR includes detailed files on off-road and on-road sources used to calculate emissions such as locomotive fleet mixes and emission evaluation files. These files assisted AQMD staff in preparing our comments on the Recirculated DEIR. The AQMD staff remains concerned, however, as many of the most critical issues that the AQMD staff raised in our February 1, 2012 letter still remain unaddressed in the Recirculated DEIR.

The Recirculated DEIR shows that the Proposed SCIG project will generate significant localized air quality impacts. Based on the Recirculated DEIR, the Proposed SCIG project will generate localized NO₂, PM₁₀, and PM_{2.5} concentrations and would exceed the applicable significance thresholds by more than 190%, 420%, and 80%, respectively. These NO₂, PM₁₀, and PM_{2.5} concentrations from the proposed project will impact residents, school children and other sensitive populations near the proposed railyard. In addition, the Environmental Justice section of the Recirculated Draft EIR states that, "Because the area surrounding the proposed Project site is predominantly minority and low-income, Impact AQ-4 [*localized NO₂ and PM impacts*] would constitute a disproportionately high and adverse effect on minority and low-income populations." These pollutants are associated with chronic respiratory diseases such as asthma as

well as declines in pulmonary function, especially in children. The Recirculated DEIR does contain a mitigation measure for diesel PM, however, this measure does not address significant NO₂, PM₁₀, and PM_{2.5} levels.

The following primary concerns that were not addressed in the Recirculated DEIR are discussed below.

1. Zero-Emission Container Movement Between Marine Terminals and SCIG.

While the Recirculated DEIR has modified the description of the zero-emissions technologies demonstration program (pg. 3.2-99) to contain more specificity and goals, there is still no proposed mitigation or project alternative which includes a zero-emission container movement system. The proposed Project must incorporate a zero-emission component to mitigate significant localized NO₂, PM₁₀ and PM_{2.5} impacts to the surrounding communities. Additional discussion on this concern is included in Attachment A.

Zero-emission container movement technologies are a feasible mitigation measure that must be included in the proposed Project because it: (1) is feasible within the early life of the project; (2) would only be required for the short distance of less than five miles; and (3) is consistent with the zero-emission freight corridor alternative contained in the Proposed I-710 Corridor Project Draft EIS/EIR.

Due to the need for a zero-emission container transport demonstration program for electric-battery drayage trucks, the use of zero-emission container transport should account for 100% of containerized drayage trips by no later than 2020. An implementation schedule was provided in the Draft EIR as follows:

1. 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).
2. 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

The Recirculated DEIR fails to address the need to mitigate the air quality impacts from line-haul locomotives. In our original comment letter on the Draft EIR we specified that line-haul locomotives should meet the following requirements:

1. By 2018, at least 25% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.
2. By 2020, at least 95% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.

The year 2020 requirement is consistent with the long-term goal of Clean Air Action Plan (CAAP) measure RL-3. Both the Draft EIR and Recirculated DEIR contain a project condition PC AQ-12 which incorporated the CAAP measure RL-3. As stated on page

3.2-99 of the Recirculated Draft EIR, “project conditions are recommended for inclusion in the lease between the LAHD and BNSF for the SCIG facility [and] are not required as CEQA mitigation measures.” Further, on page 3.2-104 the Recirculated Draft EIR states “The following measures are Project Conditions that may be included in the lease for the SCIG facility subject to approval by the Board. The conditions are not required as CEQA mitigation measures but are included here for tracking purposes.” This language is less stringent than what is required under CEQA and puzzling if the lead agency truly intends to make RL3 a requirement of the project. Pursuant to CEQA Guidelines 15091(a) and Public Resources Code 21081(a), all feasible mitigation must be implemented to reduce any significant impacts of the project. As the project has significant localized NO₂ impacts, in part due to operation of locomotives, the lead agency must specify in the EIR that implementation of RL3 is a requirement, not just a recommendation. AQMD staff requests that this condition therefore be specified as a mitigation measure and as a requirement of the project, and that regular monitoring of this measure be made a part of the project.

In addition, the AQMD staff is also concerned that this condition does not meet the minimum performance standards of RL-3 which requires 50% of line-haul locomotives to be Tier 4 and 40% to be Tier 3 by 2023. PC AQ-12 also weakens the performance standards by allowing the RL-3 emission goals to be made up anywhere in the Basin, and not necessarily in and around the proposed SCIG project site. This has the effect of allowing adverse air quality impacts to be higher in the nearby residential community of West Long Beach than they would normally be if the emission reductions would occur at or near the proposed facility site. Additional discussion on this concern is included in Attachment A. Since the project has significant localized NO₂ impacts, which are partly caused by locomotives, implementation of RL3 cannot be allowed to be satisfied by reductions occurring elsewhere in the Basin, as this would not mitigate localized impacts.

3. Inconsistent use of Hobart Railyard in Baseline, Project, and No Project Alternatives

Like the Draft EIR, the Recirculated DEIR fails to analyze and disclose the impacts at BNSF’s Hobart Railyard (Hobart) implying that as capacity at Hobart is freed up because of SCIG, portions of Hobart will go dormant. The Recirculated DEIR assumes that the proposed project will eliminate 95 percent of truck trips between the ports and the Hobart Railyard, and all of the train activity going to the Hobart Railyard associated with SCIG-related cargo will be eliminated. By including Hobart in the Baseline, the Lead Agency is treating Hobart and SCIG as a system. The proposed project must be evaluated as the same system as the baseline. The containers going to Hobart due to the additional capacity that the proposed SCIG facility provides to the “system” must be analyzed as part of the proposed project.

The lead agency in the Recirculated DEIR states, “Because that growth is not dependent on SCIG being built, it is not appropriate to evaluate that growth as part of SCIG, or any truck trips not going to SCIG. The same is true for regional locomotive traffic. This approach is supported by BNSF’s representation that they have no current plans to move intermodal business from other regional facilities to Hobart in the event that SCIG is

built.” We disagree with this assessment. The Recirculated DEIR must evaluate the extent to which capacity opened up at the Hobart Railyard by the construction of the proposed SCIG facility. The amount, origination, destination, and growth of other cargo, e.g. domestic freight containers at the Hobart Railyard as a result of the proposed SCIG facility being built can certainly be reasonably estimated given that BNSF and the lead agency successfully estimated these parameters in order to evaluate the No Project Alternative. Leaving the Hobart-related trucks and trains in the baseline and No Project Alternative, and not putting the emissions in the proposed Project makes the proposed Project look better when compared to the No Project Alternative and the incremental emissions between the proposed Project and the CEQA Baseline appear smaller than they would be otherwise.

Attached are more details regarding these and other comments. 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

EE:IM

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

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

Operational Mitigation Measures

Furthering CEQA's policy to ensure that the long-term protection of the environment is a guiding criterion in public decisions, CEQA contains a substantive mandate that requires public agencies "to refrain from approving projects with significant environmental effects if "there are feasible alternatives or mitigation measures" that can substantially lessen or avoid those effects.'" (Pub. Res. Code § 21002; *County of San Diego v. Grossmont-Cuyamaca Community College Dist.* (2006) 141 Cal. App. 4th 86, 98.) Such measures must be fully enforceable through permit conditions, agreements, or other measures. (Pub. Res. Code § 21081.6(b).)

The Recirculated DEIR fails to include all feasible operational mitigation measures to reduce significant air quality impacts from the operation of the proposed Project. Under CEQA, the lead agency must adopt all feasible measures to mitigate significant air quality and health impacts. As with the Draft EIR, the Recirculated DEIR lacks any mitigation for NO₂ impacts. The Recirculated DEIR shows that locomotives and on-road trucks represent over 95% of the SCIG-related NO_x emissions from the proposed Project. These emissions contribute to the significant localized NO₂ impacts caused by the proposed project. The Proposed Project can and must incorporate the following mitigation measures or project alternatives which would mitigate the significant localized NO₂ impacts, as well as the significant PM₁₀ and PM_{2.5} impacts from the truck and locomotive sources to the surrounding community: (1) zero-emission container movement between marine terminals and SCIG; and (2) greater acceleration of use of Tier 4 line-haul locomotives. The elements and actions are discussed in more detail below.

Zero-Emission Container Movement Between Marine Terminals and SCIG is a Feasible Mitigation Measure

Transporting containers using zero-emission container transport technologies is a feasible mitigation measure and must be implemented to mitigate significant NO₂ and PM impacts from the proposed project. The proposed Project offers a unique opportunity to deploy zero-emission technologies because the distances between the marine terminals and the project site is less than five miles, which makes the use of zero-emission transport for this short range distance extremely practical. As was highlighted in our previous comment letter, the lead agency is in a position to provide a clear message to technology providers that zero-emission technologies will be needed.

In our original comment letter on the Draft EIR, the AQMD staff commented that zero-emission technologies are a feasible mitigation measure and should be used to move containers to and from the marine terminals and SCIG railyard. A zero-emission technology is an emissions technology that does not create tailpipe emissions from the vehicle or system transporting containers. Such a mitigation measure or project alternative is required by CEQA to be included

in the EIR in order to mitigate the significant impacts of the project (CEQA Guidelines section 15126.4).

While the Recirculated DEIR has modified the description of the zero-emissions technologies “demonstration program” (pg. 3.2-99) to contain more specificity and goals, the Recirculated DEIR still does not contain a commitment to implement a zero-emission component (either as a mitigation measure or as a project alternative). The AQMD staff agrees that a demonstration program is a necessary step, however, it is still necessary to include a mitigation measure for zero-emission container movement. A project condition to conduct a demonstration program does not guaranty that the proposed Project will implement zero-emission trucks draying containers to and from the SCIG Railyard. The proposed Project must incorporate a zero-emission component to mitigate the localized NO₂, PM10 and PM2.5 impacts to the surrounding communities.

Zero-emission technologies can be commercialized by 2016. Zero-emission container transport technologies can be commercialized in sufficient time to begin operational deployment between the ports and proposed SCIG facility beginning in 2016, with 100% deployment by 2020. Any of several types of zero-emission truck technologies could be used. 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 (which could be coupled with natural gas or other power for range extension), and zero-emission hybrid or battery-electric trucks with “wayside” power (such as electricity from overhead wires). 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 (e.g. natural gas) or fuel cells. A discussion of these technologies and their current state of commercialization is included in this comment letter as Attachment B.

The AQMD funded and provided input to a study titled Zero-Emission Catenary Hybrid Truck Market Study. This study was prepared by Gladstein, Neandross & Associates and was released in late March 2012. The study explores the potential market for zero-emission trucks, including hybrid electric trucks with all electric range, that receive wayside power, such as from overhead electric catenary wires. Potential markets include transport between the ports and near-dock railyards such as the proposed Project. The report concludes that such technologies could provide standard operating range for local or regional trucks and could have similar or lower cost compared to other zero-emission technologies.¹

Implementation Schedule for Zero-Emission Container Movement Mitigation Measure. As previously commented on our comments on the Draft EIR, the use of zero-emission container transport, such as electric-battery drayage trucks should account for 100% of containerized drayage trips by no later than 2020. Zero-emission container transport technologies can and must be implemented at the beginning of the proposed Project’s operation in 2016 as follows:

¹ http://www.gladstein.org/tmp/ZETECH_Market_Study_FINAL_2012_03_08.pdf

1. 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).
2. By 2020, 100% of container transport between the terminals and SCIG shall be by zero emission technology.

As indicated in our previous comment letter, a 2016 deployment of zero-emission technologies could be amended to allow the percentage requirement to be delayed 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 should not be allowed since zero-emission technology, such as electric battery or similar technology can certainly be available in time to deploy sufficient numbers that time. We are also concerned that 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. What is important is that the public and commercial providers of zero-emission transport be certain that there will be a demand for zero-emission trucks in the near future. The only way to do this is with a mitigation measure with specific deployment milestones.

Maximizing On-dock Rail is a Feasible Mitigation Measure

Maximizing on-dock rail will reduce impacts at the proposed SCIG facility. The Port of LA and Port of Long Beach must have a plan to ensure on-dock rail is utilized before the proposed SCIG facility. AQMD staff is concerned that the proposed project provides additional capacity that will hinder maximizing on-dock. On-dock rail reduces the need to truck containers to near- and off-dock rail yards, and hence reduces the emissions from goods movement. As described in the *San Pedro Bay Ports Rail Study Update* (2006) several infrastructure projects (e.g. Thenard Junction, Badger Bridge, etc) and operational matters (e.g., labor agreements) must be addressed to maximize the amount of on-dock rail yard capacity and also to ensure that rail traffic from SCIG does not interfere with achieving on-dock rail capacity. By building capacity at the

proposed near-dock location before completing needed modification on-dock, there is the potential to create higher truck traffic and emissions than is necessary outside of the port complex. AQMD staff requests the lead agency include a mitigation measure that commits to implementing any infrastructure projects needed to support on-dock rail capacities in the future, addresses operation matters to ensure on-dock rail at the Ports of Los Angeles and Long Beach are maximized before the proposed SCIG site is utilized, and includes mechanisms to ensure that use of on-dock occurs before near- and off-dock.

Use of Tier 4 Line-Haul Locomotives is a Feasible Mitigation Measure

The Recirculated DEIR fails to address the need to mitigate the air quality impacts from line-haul locomotives. In our original comment letter on the Draft EIR we specified that line-haul locomotives should meet the following requirements:

- 1 By 2018, at least 25% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.
- 2 By 2020, at least 95% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.

The year 2020 requirement is consistent with the long-term goal of Clean Air Action Plan (CAAP) measure RL-3. Both the Draft EIR and Recirculated DEIR contain a project condition PC AQ-12 which incorporated the CAAP measure RL-3. As stated on page 3.2-99 of the Recirculated Draft EIR, “project conditions are recommended for inclusion in the lease between the LAHD and BNSF for the SCIG facility [and] are not required as CEQA mitigation measures.” Further, on page 3.2-104 the Recirculated Draft EIR states “The following measures are Project Conditions that may be included in the lease for the SCIG facility subject to approval by the Board. The conditions are not required as CEQA mitigation measures but are included here for tracking purposes.” This language is less stringent than what is required under CEQA and puzzling if the lead agency truly intends to make RL3 a requirement of the project. Pursuant to CEQA Guidelines 15091(a) and Public Resources Code 21081(a), all feasible mitigation must be implemented to reduce any significant impacts of the project. As the project has significant localized NO₂ impacts, in part due to operation of locomotives, the lead agency must specify in the EIR that implementation of RL3 is a requirement, not just a recommendation. AQMD staff requests that this condition therefore be specified as a mitigation measure and as a requirement of the project, and that regular monitoring of this measure be made a part of the project.

In addition, the AQMD staff is also concerned that this condition does not meet the minimum performance standards of RL-3 which requires 50% of line-haul locomotives to be Tier 4 and 40% to be Tier 3 by 2023. PC AQ-12 also weakens the performance standards by allowing the RL-3 emission goals to be made up anywhere in the Basin, and not necessarily in and around the proposed SCIG project site. This has the effect of allowing adverse air quality impacts to be higher in the nearby residential community of West Long Beach than they would normally be if the emission reductions would occur at or near the proposed facility site.

While Tier 4 locomotives are not yet available, Tier 4 emission standard 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 non-road 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

Commitment to CAAP Measure RL3 Goal of 95% Tier 4 by 2020

The Clean Air Action Plan (CAAP) Measure RL3 specifies a goal that 95% of all locomotives serving the ports by 2020 will be Tier 4. As stated in a 2009 state Air Resources Board (ARB) report², in order to achieve a 100% “statewide” fleet of Tier 4 locomotives by 2020, BNSF would need to have approximately 1,920 Tier 4 locomotives in its fleet. BNSF currently operates a fleet of 5,219 diesel freight locomotives.³ According to the Recirculated Draft EIR emissions analysis, the locomotives visiting the SCIG site will be representative of the national average fleet. As analyzed in the emission calculation spreadsheets provided to AQMD staff, this national average will have approximately 26.5% Tier 4 locomotives in 2020. Assuming no growth in the number of BNSF line haul locomotives, this fraction would result in a minimum of 1,383 Tier 4 locomotives in BNSF’s fleet in 2020. As SCIG will only handle between two and three trains per day in 2020, there will only be approximately 12 locomotives (four per train) serving SCIG in the South Coast Air Basin on any given day. These 12 locomotives represent less than 1% of BNSF’s Tier 4 fleet. Given the abundance of excess Tier 4’s that should be available to BNSF, it is unclear why the EIR cannot therefore commit to achieving RL3 for the largest intermodal market in the country, in the region with the worst air quality.

Inconsistent use of Hobart in the Baseline, No Project, and Proposed Project

The Recirculated Draft EIR’s analysis of the Hobart railyard in the baseline, no project, and proposed project analyses are inconsistent and may potentially yield misleading conclusions about the environmental impacts of the proposed project. The Recirculated DEIR included trucks and locomotives at the Hobart Railyard in the Baseline and No Project analyses, but excluded Hobart from the Proposed Project.

As described in the Recirculated DEIR, the proposed SCIG Project will handle direct intermodal containers exclusively. In Appendix G4, it is described that the Hobart Railyard handles three types of containers: (1) direct intermodal (also referred to as Inland Point Intermodal (IPI)) containers, (2) transload, and (3) domestic containers. Because the Proposed SCIG Project will only handle direct intermodal containers, the Recirculated DEIR only addresses the direct

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

² *Technical Options to Achieve Additional Emissions and Risk Reductions from California Locomotives and Railyards*, 2009. Table II-2

³ <http://www.bnsf.com/about-bnsf/financial-information/surface-transportation-board-reports/pdf/11R1.pdf>
Table 710

intermodal containers at Hobart, ignoring how the other two types of containers (transload and domestic containers) would change under the proposed SCIG project as containers at SCIG would open capacity at the Hobart railyard. Under the No Project Alternative, Appendix G4 shows how transload and domestic containers will increase in the future. The Recirculated DEIR states that this increase in transload and domestic containers will also increase under the proposed Project. The AQMD staff believes that this growth in transload and domestic containers at Hobart will “fill-in” the gap from direct intermodal cargo that will go to the proposed SCIG site. If the lead agency insists on including drayage truck trips and train operations to and from the Hobart Railyard in the CEQA Baseline and No Project, it must also include the future truck and train trips to and from the Hobart Railyard allowed by the capacity at Hobart Railyard that is freed up because of construction of the proposed SCIG facility. The Final EIR must include the emissions from trucks and locomotives that will occur at the Hobart railyard that are result of additional capacity that the proposed SCIG project provides.

There is also a contradiction in the lead agency’s argument that it is speculative to analyze the future operations at the Hobart Railyard. The emissions from Hobart-related trucks and trains are included for the No Project Alternative. If the amount, origination, destination, and growth at the Hobart Railyard can be projected for future years in the No Project Alternative (as presented in Appendix G4), it is possible to evaluate the growth in operations at Hobart for the proposed Project.

Under CEQA, a “project” means the *whole* of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.” (CEQA Guidelines § 15378(a).) It is reasonably foreseeable that by diverting IPI trips from Hobart to SCIG, Hobart will be used by BNSF for other purposes, such as Transload and Domestic uses. By ignoring the impacts associated with the changed use of Hobart as a direct result of SCIG, the recirculated Draft EIR fails to analyze the whole of the project and therefore underestimates impacts. (*See, Association for a Cleaner Environment v. Yosemite Community College Dist.* (2004) 116 Cal. App. 4th 629, 637-41.)

The Proposed I-710 Zero Emission Freight Corridor Should be Considered in the Analysis of the No Project

In the No Project Alternative’s analysis, trucks are assumed to dray containers from the ports to the Hobart rail yard via the I-710 freeway. The emissions from these trucks are calculated using emission factors from the EMFAC2011 software available from the state Air Resources Board. This analysis does not discuss how the proposed I-710 project may also affect emissions estimates. Two of the proposed alternatives analyzed in the I-710 project EIS/DEIR would include a zero-emissions freight corridor that would transport trucks from the ports directly into the Hobart rail yard.^[1] The lead agency is a funding partner for the I-710 project and is aware that one of the zero-emissions freight corridor alternatives is under consideration as the preferred project alternative. Under either of the two alternatives, trucks travelling within this corridor would operate via zero emissions technology (e.g., with a wayside power system similar to some bus systems). The Draft EIR for the I-710 project has already completed its comment period and certification of the document is tentatively scheduled for certification in 2013. The I-710 Draft EIS/EIR assumed that the project would be constructed no later than 2035. Since it is reasonably

^[1] Draft EIR available here: <http://www.dot.ca.gov/dist07/resources/envdocs/docs/710corridor/>

foreseeable that by 2035, the I-710 will involve a zero-emissions freight corridor, the no project alternatives analysis in the project peak year of 2035 should therefore consider that trucks traveling to Hobart would have zero emissions.

If trucks travelling to Hobart were considered to have zero emissions, then the offsite truck emissions would be approximately 125 lbs/day (from current tenants) or less, instead of the reported 1,151 lbs/day. With this reduction, the CEQA NOx impacts would be approximately negative 1,493 lbs/day. As shown in Table 3.2-26, the proposed project NOx emissions in 2035 are negative 901 lbs/day. Hence the No Project Alternative would have 592 lbs/day less NOx emissions than the Proposed Project Alternative. Similarly, Diesel Particulate Matter emissions would be reduced to near zero in the No Project Alternative. The reported health risk benefits from the Proposed Project compared to the No Project Alternative (Table 5-11)⁴, especially along the I-710 freeway would probably no longer exist were the I-710 project taken into account in the SCIG analysis.

Because the negative air quality impacts of the No Project Alternative in comparison with the Proposed Project Alternative have been presented as a primary consideration in favor of constructing SCIG, it is imperative that the Final EIR accurately represent the true impact of the two alternatives. If the Proposed Project will worsen air quality compared to a No Project scenario, then the decision makers and the public must be aware of this prior to considering the project for approval.

Key Assumptions Used in Emissions Calculations Must be Conditions of Proposed Project

Several assumptions in the emissions calculations are key to determining the potential significance of air quality impacts. As many of these assumptions are not governed by existing regulations or other mitigation measures, the Lead Agency should include these conditions that limit the activity at the project site to what is analyzed in the Recirculated DEIR. If the activity should increase beyond what is assumed in the Recirculated DEIR, then CEQA must be re-opened and future Subsequent EIRs may be required. Specifically, AQMD staff requests that conditions be placed on the project that (See table below):

- limit the peak daily and annual average number of trucks and locomotives visiting the site to the values identified for key milestone years in the EIR,
- limit the peak daily and annual average locomotive tier to what is assumed in the EIR, and
- limit the amount of locomotive idling and switching activity onsite to what is assumed in the EIR.

⁴ See also: <http://www.bnsfconnects.com/pages/air-quality-maps>

Table of Daily Maximums

Activity	2016		2023		2035		2046	
	Average	Peak	Average	Peak	Average	Peak	Average	Peak
Truck Trips	570	638	806	903	2,771	3,103	2,771	3,103
Train Trips	2	2	3	3	8	8	8	8
Train Idling (hrs)	5.4	5.5	5.2	5.5	5.2	5.5	5.4	5.5
Switcher Operation (hrs)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

Note 1. Truck and train trips are presented as round trips

Note 2. Peak truck Trips based on average trips (Table C1.2-2) multiplied by 1.12

Note 3. Recirculate DEIR assumed peak train trips to be equivalent to average

Note 4. Train idling represents totally daily idling per train based on spreadsheets CBI-2016 thru -2016, and CBI-Worst Case

Note 5. Switcher operating hours are per switcher

Locomotive Emissions

Locomotive Peak Daily Emissions

The Recirculated DEIR contains insufficient information for the public to determine the reasonableness of the locomotive peaking factor used to calculate peak day locomotive emissions. In the Draft EIR, peak day locomotive emissions were estimated assuming that all daily locomotive trips on the peak day were conducted by the lowest Tier level locomotive in the fleet mix for each analysis year. The AQMD staff did not comment on this approach because it was conservative, in that it produced locomotive emissions based on the highest emission rate available in the projected fleet. However in the Recirculated DEIR, peak day locomotion emissions were determined by applying a peaking factor to all future year locomotive emission factors. The peaking factor used in the Recirculated DEIR has substantial impacts on the locomotive emissions reported for the proposed Project. For instance, the 2035 NO_x emissions for the proposed Project in the Recirculated DEIR and Draft EIR were 916 pounds per peak day and 3669 pounds per peak day, respectively. This amounts to a 75 percent drop in off-site NO_x locomotive emissions in 2035. The peaking factor used in the Recirculated DEIR was derived by assuming a ratio of the peak day locomotive fleet mix average emissions factor in 2010, to the average day locomotive fleet mix average emissions factor in 2010. No supporting data or information is provided in the Recirculated DEIR on the underlying assumptions that went into deriving the peaking factor. As a result, the AQMD staff is unable to verify that the peaking factor is reasonable.

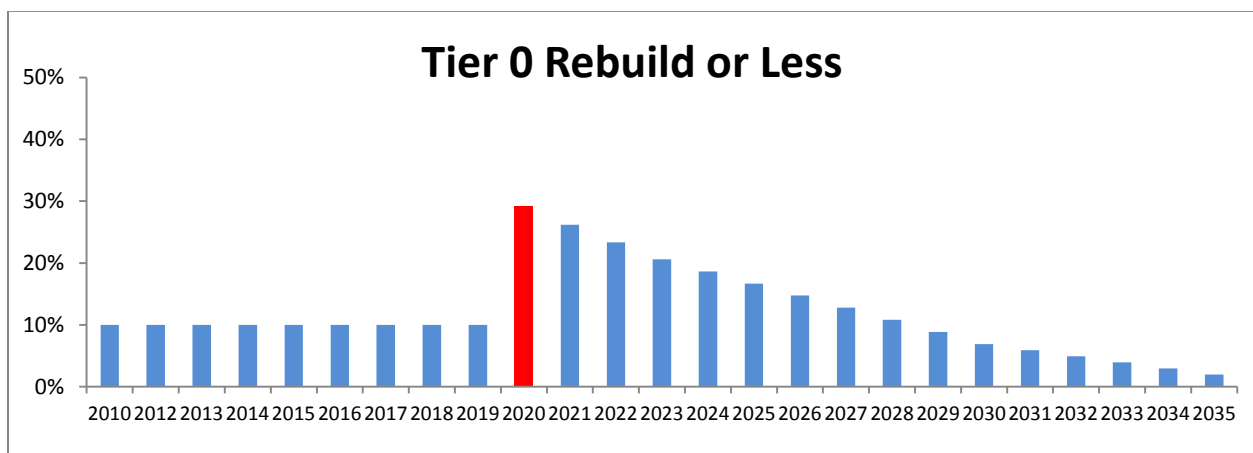
The application of the peaking factor to future locomotive emission rates further exacerbates the belief of AQMD staff that future locomotive fleet mixes, assumed in the emission rates tables of Appendix C1.2-21 and C1.2-22, over-predict the penetration of Tier 4 locomotives in milestone years 2023 and 2035. When coupled with the peaking factor, it results in an underestimation of the emission rates (and therefore emissions) for the peak day scenario. The approach used in the Draft EIR avoided this problem somewhat by assuming that the peak day emission rates were based on the lowest tier (highest emission rate) locomotive making up the fleet in a specific year.

Locomotive Emission Factors

The Recirculated DEIR fails to provide adequate clarity regarding how the locomotive emission factors relate to both the 1998 Fleet Average Agreement between CARB and the Class I railroads, and the EPA national locomotive fleet forecast. In our original comment letter on the Draft EIR we asked for an explanation on how the emission factors in Tables C1.2-20 through C1.2-22 were estimated and whether they were based on projected in-use emission rates or emission standards. AQMD staff made this same comment on the HRA analysis section of our original comment letter. In order for the AQMD staff to determine if the emission factors are reasonable, the lead agency needs to provide a methodology on the derivation (with appropriate references) of the emission factors and how they were converted from grams per brake-horsepower rate to a grams per hour rate. No change in the methodology description was provided in the Recirculated DEIR and the AQMD staff is requesting that the lead agency provide this information in the Final EIR.

Tier 0 Contribution to the Project Locomotive Fleet

The projected locomotive fleet mix shows a substantial increase in the percentage of Tier 0 and Tier 0 rebuilds starting in 2020. The air quality analysis in the Recirculated DEIR uses this fleet mix to evaluate the air impacts from the proposed Project. The Figure below presents the percentage of Tier 0 and Tier 0 rebuilds in the projected locomotive fleet. From 2010 to 2019, the percentage of Tier 0 and Tier 0 rebuilds is 10%. Starting in 2020, the percentage of Tier 0 and Tier 0 rebuilds abruptly increases to approximately 30%, and slowly declines to zero after 2035 (See figure below). The AQMD staff is concerned that there is no rationale for this dramatic increase in the number of Tier 0 and Tier 0 rebuilds. Including this many Tier 0 and Tier 0 rebuilds is a step backward towards the goal of a clean locomotive fleet. As compared to Tier 4 emission rates, Tier 0 and Tier 0 rebuilds emit approximately 630% more PM and 515%, more NO_x, than a Tier 4. Because air quality impacts are greatly increased by the high emission rates and significant penetration of Tier 0 and Tier 0 rebuilds in the fleet, the lead agency should restrict access to the proposed SCIG Railyard to only locomotives that meet Tier 2 rebuild and above emission levels.



Emissions Calculation Error with Locomotives Exhaust

AQMD staff identified an error in the emission calculation spreadsheet titled Loco EFs.xls that appears to systematically affect nearly all locomotive exhaust emission calculations. In

worksheet 'Worst_2010_EFs_unmitigated', the emission factors in cells C6:L9 are calculated by multiplying the percentage of the fleet dedicated to a tier (e.g., Tier 0) specified in that worksheet by emission factors for that same tier found in another file titled 'Engine_EFs_summary_050907_forecasts_for2010.xls'. It appears that this calculation references the incorrect cells in the second file such that the percentage of Tier 0 locomotives is multiplied by the Tier 1 emission factor, Tier 1 is multiplied by Tier 2, etc.

These emission factors calculated in the 'Worst_2010_EFs_unmitigated' are then used to create peaking factors to describe peak to average locomotive emissions. These peaking factors are applied to different analysis years (2016, 2023, etc.) and scenarios (project, no project, etc.). It is unclear to AQMD staff what impact correcting this error will have on the significance determinations as it should modify both the project and baseline emissions estimates and modeling results. It is unclear if this error was also present in the Draft EIR as AQMD staff did not receive these spreadsheets for that document. AQMD staff recommends that the analysis be corrected to reflect appropriate calculations.

Locomotive Peaking Factors

It is unclear how the logic used to derive the peaking factors calculated in the LocoEF.xls table applies to future years. First it is unclear how the 2010 'peak' day was derived. A note in this spreadsheet refers to a memo (Hobart Average and Peak Day Memo 032112.pdf) that is not included in the Recirculated Draft EIR. More explanation should be provided explaining how the peak day was derived for the 2010 year. It is also unclear that this same peaking factor should apply to all future years. The Recirculated Draft EIR does not explain how the 2010 peaking factor will remain constant in future years, especially as turnover of the fleet may produce a jump in Tier 0 rebuilds in 2020 (from 10% to 26%).

Locomotive Activity Along the San Pedro Branch Line Adjacent to Sensitive Receptors

In the proposed project, when trains are being built or deconstructed, line haul locomotives will pull cars up the San Pedro Branch line to the north and east of the site. This rail line runs adjacent to sensitive receptors including homes and schools. As mitigation, the project should commit to avoiding whenever possible locomotive activities along this track during times when children are expected to be outside, including lunch periods, recesses, and other times that the school district may identify. In addition, there should be strict monitoring and enforcement of locomotive activity along this line to ensure that idling is kept to a minimum and does not exceed estimates in the EIR.

Train Counts

The Recirculated DEIR fails to address AQMD staff comments about the unusually low number of train trips reported for calendar year 2035. In our comments on the Draft EIR, the AQMD staff requested clarification on how the annual train trips can be so much lower than the estimated train trips for the projected train trips for the proposed expansion of the ICTF Railyard. Intuitively, we would expect the train counts to be similar since the number of container lifts was equivalent. The lead agency estimates the proposed project will process 1.5 million lifts per year at its maximum operating capacity in 2035. The Notice of Preparation (NOP) for the proposed modernization and expansion project for the Intermodal Container Transfer Facility (ICTF) released in January 2009, indicated that the ICTF will also process 1.5 million lifts per year at its

maximum operating capacity in 2023⁵. 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 capacity⁵. The table below summarizes our concerns.

Table of Train Counts

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

1. Recirculated DEIR, Table ES-1

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

3. 2035 for SCIG; 2023 for ICTF

Locomotive Idling During Fueling and Servicing

The Recirculated DEIR does not include any locomotive idling during locomotive fueling and servicing. In our comment letter on the Draft EIR, we raised the issue that locomotive idling times during DTL fueling and service events can be up to 150 minutes per event, and that the Draft EIR did not include any locomotive idling when estimating the emissions from DTL fueling. Since this omission can have a significant impact on emissions and air quality impacts, 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 Emissions

Drayage Truck Trips

The Recirculated DEIR fails to provide the assumptions on how the ratios in Table 3.10-13 were derived. In our previous comment letter on the Draft EIR, the AQMD staff expressed concern that it was impossible to determine the reasonableness of the bobtail ratio presented in Table 3.10-13 without further explanation on how it was derived. As a result, the proposed project would operate with fewer bobtails (tractors with no chassis) than the baseline operation (i.e., Hobart Railyard). Table 3.10-13 is repeated below for ease of discussion. 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 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.

⁵ Notice of Preparation and Initial Study, Intermodal Container Transfer Facility Modernization and Expansion Project, ICTF Joint Powers Authority, January 2009.

Table of Truck Trips per Intermodal Lift

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 AQMD 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 2-36 of the Recirculated 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 AQMD staff reiterates our request that the lead agency provide the assumptions on how the ratios in Table 3.10-13 were derived.

Claimed Reduction in Truck Trips

AQMD staff is concerned that the project proponents are claiming that this project will benefit air quality by removing trucks from the I-710 freeway, however after construction of SCIG the total number of TEU's handled are expected to be ten times higher than today. From the table below one can see that after this project is built, there will be a total rail yard capacity of 8.3 million TEUs, while the current number of TEUs handled by Hobart is only 0.83 million TEUs. While many truck trips will be diverted from Hobart to SCIG, growth will far outpace the diversion. Ultimately SCIG and Hobart combined will have the capacity to handle ten times the amount of goods as is currently handled at Hobart. This overall increase in goods movement is not addressed in the Recirculated Draft EIR and leads to the misleading conclusion that this project will reduce truck trips.

SCIG and Hobart Capacity

Scenario	SCIG Capacity (TEU/year)	Hobart Capacity* (TEU/year)	SCIG+Hobart Capacity (TEU/year)	Total TEUs analyzed in RDEIR
Existing Baseline (2010)	0	3,145,000	3,145,000	829,642 to Hobart
Proposed Project (2035)	2,775,000	5,550,000	8,325,000	2,775,000 to SCIG

**2010 capacity based on 56.9% utilization as reported in Appendix G4.*

Baseline Methodology

The AQMD staff appreciates that the Lead Agency used a floating baseline to evaluate health risk impacts from the proposed project. The staff commented on the DEIR that the floating baseline is the appropriate baseline for evaluating both the health risk impacts *and* regional criteria pollutant impacts. Although the Recirculated DEIR did use the floating baseline to evaluate health risk impacts, the floating baseline was not used to evaluate regional criteria pollutant impacts. A static baseline is an improper baseline to evaluate impacts for criteria pollutants. The static baseline used in Recirculated DEIR for criteria pollutants fails to disclose the impacts of the proposed project because it credits the proposed project with improvements in air quality that would 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. In order to properly evaluate the air quality impacts from criteria pollutants, the Recirculated DEIR should use a floating baseline similar to the one used to assess health risk.

Dispersion Modeling Parameters

AQMD staff was provided emission calculations spreadsheets, dispersion modeling input and output files, and databases that contain the results of the modeling analysis. AQMD staff is unable to verify that the modeling analysis corresponds correctly to the emission calculation spreadsheets. Modeled source strength has generally been represented by ‘unitary’ rates (e.g., 1 gram per second) that are used for efficiency in the dispersion modeling analysis. If unitary rates are used, the modeled concentrations then need to be modified to match the actual calculated source strength from the emission calculation spreadsheets. It appears that these modifications may have been performed in the databases, however the Queries that would include these calculations have not been included with the databases.

In addition, it is not clear how the emission calculations in the provided spreadsheets are translated into the modeling. The table below illustrates an example of how the values in the spreadsheet, model inputs, and databases are not correlated for one of the sources (northernmost locomotive activity on the San Pedro Branch line). There are thousands of sources that were modeled for the EIR air quality analysis.

Values Used in Emissions Calculations for San Pedro Branch

File	NO_x Hourly Emission Rate (grams/second)
<i>Spreadsheet</i> ‘CBI-2035_03.27.12.xls’*	7.13 x 10 ⁻³
<i>Database</i> ‘Project Criteria tblEmissions.accdb	9.62 x 10 ⁻⁴
<i>Model Input File</i> ‘LHMOV’	0.5

*Rate summed from multiple sources by AQMD staff

Without the ability to review these calculations, the public and AQMD staff are unable to verify the validity of the modeling analysis.

Construction Emissions and Construction Mitigation Measures

Crane Delivery

The Recirculated DEIR fails to correctly calculate the emissions from the delivery of rail mounted gantry cranes (RMG) to the proposed project site. In our comments on the Draft EIR,

we presented our concerns that the assumption of one ship capable of delivering 20 RMGs (pg. 3.2-27 in the Draft EIR) is not reasonable. This assumption has been unmodified in the Recirculated DEIR. 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 larger 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 of the Draft EIR).

Another concern presented in our comments in the draft EIR was that the cargo ships emission calculation lacks sufficient detail for AQMD staff to understand how the emissions were calculated. The lead agency failed to add sufficient detail on these calculations for us to verify their accuracy. The Final EIR should include more detailed emission calculations to fully document all emission sources of crane delivery.

MM AQ-1: Fleet Modernization for Construction Equipment

MM AQ-1 has not been revised in the Recirculated DEIR and the AQMD staff reiterates our concern that 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)

Similar to MM AQ-1, MM AQ-2 has not been revised in the Recirculated DEIR, and MM AQ-2 still specifies exceptions for import haulers and earth movers from the requirement that all on-road trucks used during construction meet the EPA 2007 on-road PM and NOx emission standards. AQMD staff sees no reason for these exceptions. All 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.

Other Comments

Characterization of U.S. EPA locomotive rule

The Recirculated DEIR fails to properly characterize the 2008 U.S. EPA locomotive rule (40 CFR Part 92). This description is inaccurate and needs to be re-written. In our comments on the Draft EIR, we noted that Draft EIR description of the rule in Chapter 1 – Introduction stated “...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 NO_x 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 AQMD staff requests that the description of the 2008 U.S. EPA locomotive rule be amended in the Final DEIR to reflect the actual rule requirements.

ATTACHMENT B ZERO-EMISSION TRUCK TECHNOLOGIES

Overview

AQMD comments regarding the Recirculated DEIR for the Proposed SCIG Railyard Project strongly support the inclusion of a zero-emission component into the proposed project. The specific technology or technologies used to implement this component would be determined by the lead agency. In our comments on the Draft EIR we provided Attachment B which discussed the state of development of zero-emission container transport systems. Based on this discussion we concluded that the deployment of electric trucks was feasible early in the lifetime of the proposed Project. The following discussion includes an update to the previously submitted attachment and focuses only on electric truck technologies.

Zero emission technologies for transport applications, including heavy trucks, are developing rapidly and can, with appropriate actions by the lead agency and other entities, be deployed early in the operational phase of the proposed Project. Any of several types of zero-emission truck technologies could be used. 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 (which could be coupled with natural gas or other power for range extension), and zero-emission hybrid or battery-electric trucks with “wayside” power (such as electricity from overhead wires).

Several recent analyses have supported the technical feasibility of implementing zero emission truck technologies in the I-710 corridor. For example, AQMD and LA Metro co-funded preparation by CALSTART of a report titled, “Technologies, Challenges & Opportunities I-710 Corridor Zero Emission Freight Corridor Vehicle Systems.” The report was released in June and examines whether a Class 8 truck could be developed that would meet the zero-emission needs of the I-710 project alternatives described in the Draft EIR/EIS. CALSTART prepared the report with input from a wide range of industry experts. Among the findings are the following:

“The development of a vehicle or vehicle system (truck and infrastructure power source) that can move freight through the I-710 Corridor with zero emissions has no major technological barriers. In fact, there are several technical approaches that can achieve the desired outcome. Solutions can be developed based on existing designs and technical knowledge, and require no fundamental research or technology breakthroughs. Small-scale demonstrations can begin immediately and commercialization of proven designs can certainly be achieved by 2035, the horizon year of the I-710 Corridor Project. Provided there is a strong focus on the commercialization process, this assessment finds commercial viability could occur well before 2035, indeed within the next decade.”⁶

The report also noted an unprompted and “particularly striking” degree of consensus by experts around the most promising and commercially viable approaches. The report states:

“A ‘dual mode’ or ‘range extender’ Hybrid Electric Vehicle (HEV) with some EV-only capability was seen as the most feasible solution, particularly if combined with an

⁶ http://www.metro.net/projects_studies/zero_emission/images/CALSTART_I-710_TCO_Report.pdf, pg.2

infrastructure power source such as catenary or in-road, which would allow for smaller battery packs aboard the vehicles.”⁷

The report concluded by stating:⁸

- “A ZE truck to serve the I-710 freight corridor (in Alternatives 6B or 6C) is fully technically feasible and can be based on vehicle architectures and designs already in prototype status.
 - Several manufacturers and suppliers have existing systems and prototype trucks ranging from near-zero- to full zero-emissions. These include dual-mode hybrids; plug-in hybrids; range-extender battery electrics; hydrogen fuel cell EVs, and battery electric trucks.
- “A zero-emissions freight truck can be developed for potential production well within the proposed timing of the corridor project. Indeed, such a truck could be developed in advance of the corridor’s actual construction.
- There is a high degree of agreement on the near-term technical approaches that are most promising for a zero-emissions truck over the next five years to meet the stated requirements of the I-710 freight corridor alternatives 6B & 6C.
 - A dual-mode hybrid or range-extended hybrid (possibly using a natural gas engine) with some engine-off driving capability (hence zero tailpipe emissions) coupled with corridor-supplied electrical power (lowest risk is believed to be a catenary system) was overwhelmingly identified as the most feasible system in the 5-year time frame.
- Other possible less likely near-term solutions included in-road power, all-battery trucks with fast charge or battery swap, zero-emission equivalent engines (virtually zero NOx and PM) and exotic fuel engines.
- A single-purpose truck is considered less likely to be successful, while a multiple purpose truck is considered much more likely. Manufacturers in particular believe a successful system must be useful beyond the corridor or its production cannot be justified or sustained.
- Based on interview responses, technology is not considered a barrier to a zero-emission freight truck. Fundamental research and development is not required. Additional development and demonstration of systems and system integration, and on fielding and validating prototype vehicles, would be valuable.
- Development timelines run from near term demonstrations within eighteen months to three years, to the potential for production in as few as five years, assuming market demand was sufficient to justify moving to production. Funding assistance will be needed to speed development, validation and deployment. It will also be likely needed to support purchase. Longer-term solutions were not examined here, as the 5-year time frame best fit the I-710 project.”

The report also noted the need to establish an economic case for a zero-emission corridor and its vehicles, including incentives, inducements and potential regulations. CALSTART

⁷ http://www.metro.net/projects_studies/zero_emission/images/CALSTART_I-710_TCO_Report.pdf, pg.4,7

⁸ http://www.metro.net/projects_studies/zero_emission/images/CALSTART_I-710_TCO_Report.pdf, pg.31

recommended that developing this structure for a zero-emission freight corridor should be conducted in parallel with technology demonstration as soon as practicable. (Page 33).

Additional Information: Types of 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 (e.g. natural gas) 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)). Battery electric trucks can be connected to “wayside power” (such as overhead catenary wires) to extend range.



PREV

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, are beginning to be deployed in passenger vehicles, and are beginning to be demonstrated in heavy duty truck port applications.



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. For example, the large vehicle drive-train manufacturer Meritor has developed such a heavy-duty truck and it has been 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.



Figure 3: Dual-Mode Hybrid (Meritor)

Trucks With Wayside Power (e.g. “Trolley Trucks”)

One largely existing technology that could be used to 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. 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.⁹



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

The AQMD funded and provided input to a study titled Zero-Emission Catenary Hybrid Truck Market Study. This study was prepared by Gladstein, Neandross & Associates and was released in late March 2012, and presented at the ACT Expo in May. The study explores the potential market for zero-emission trucks, including hybrid electric trucks with all electric range, that receive wayside power, such as from overhead electric catenary wires. Potential markets include the I-710, transport between the ports and near-dock railyards, and a potential east-west freight

⁹ 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 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/>).

corridor. The report concludes that such technologies could provide standard operating range for local or regional trucks and could have similar or lower cost compared to other zero-emission technologies.¹⁰

The Zero-Emission Catenary Hybrid Truck Market Study¹¹ states “As the I-710 expansion project moves forward, decisions will be made about the best technologies to reduce truck related emissions and traffic congestion from the corridor. In 2004, the local communities along the I-710 identified their preferred strategy, an expansion of the I-710 including the addition of a four lane dedicated roadway for trucks. Since that time, much work has been done to evaluate the feasibility of zero emission trucks on the proposed dedicated roadway. The concept of zero emission trucks has gathered significant support by some I-710 project committee members and the concept looks very promising for inclusion in the ultimate project recommendation, due in 2012. Whether the recommendation would specify catenary systems, other wayside power options, or opportunity charging, the truck platform considered in this market study would be easily adapted to suit the selected zero emission system. The zero emission system selected by the I-710 project committee could be strongly influenced by a working system serving the near-dock rail yards at the ports. The benefits of using the same system for the CA-47/103 and the I-710 are significant.”

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.

¹⁰ http://www.gladstein.org/tmp/ZETECH_Market_Study_FINAL_2012_03_08.pdf

¹¹ http://www.gladstein.org/tmp/ZETECH_Market_Study_FINAL_2012_03_08.pdf



Via Email and U.S. Mail

March 6, 2013

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

Dear Mr. Cannon:

Final 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 Final Environmental Impact Report (FEIR) for the Southern California International Gateway (SCIG) Project. The SCAQMD staff previously submitted comments on the Draft Environmental Impact Report (DEIR) on November 30, 2011, January 19, 2012, February 1, 2012, and February 14, 2012 and on the Recirculated Draft Environmental Impact Report (RDEIR) on November 14, 2012.

The SCAQMD staff is concerned that the EIR does not fully describe the air quality and public health implications of the proposed SCIG project, or all feasible mitigation measures. The proposed Project will substantially increase truck and train activities close to, and generally upwind of, a community with residences, schools, and workplaces. The proposed Project is unlike other major port-infrastructure projects approved in recent years because of its location and close proximity to existing sensitive land uses. At full build out there will be 2 million truck trips and nearly 6,000 train trips annually moving cargo in and out of the SCIG site. There are substantial air emissions that will affect public health and potentially impede the ability for this region to achieve state and federal air quality standards.

The FEIR shows that the Proposed SCIG project will generate significant localized air quality impacts. Based on the FEIR, the Proposed SCIG project will exceed the applicable significance thresholds for NO₂, PM₁₀, and PM_{2.5} by up to 250%, 420%, and 80%, respectively. These NO₂, PM₁₀, and PM_{2.5} exceedances from the proposed project will impact residents, school children and other sensitive populations near the proposed rail yard. In addition, the Environmental Justice section of the Recirculated Draft EIR states that, "Because the area surrounding the proposed Project site is predominantly minority and low-income, Impact AQ-4 [*localized NO₂ and PM impacts*] would constitute a disproportionately high and adverse effect on minority and low-income populations." These pollutants are associated with chronic respiratory diseases such as asthma as well as declines in pulmonary function, especially in children.

The FEIR contain one mitigation measure for particulate emissions (sweeping). However, the FEIR does not contain any mitigation measures that commit to reducing operational NO₂ impacts. The two largest source categories contributing to the NO₂ impacts are heavy-duty trucks and locomotives. As stated in previous comment letters to the Port of Los Angeles in the DEIR and RDEIR zero-emission container movement technologies and use of Tier 4 locomotives are feasible mitigation measures that must be included in the proposed Project.

Because of deficiencies in analysis and mitigation as described above and in the attachment, the EIR must be sent back to staff for revision. 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

Attachment

SN:PG:BB:VT:IM

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

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

Use of Tier 4 Line-Haul Locomotives is a Feasible Mitigation Measure

The Final EIR fails to address the need to mitigate the air quality impacts from line-haul locomotives. In the District comment letter on the DEIR and RDEIR, the SCAQMD staff specified that line-haul locomotives should meet the following requirements, consistent with the long-term goal of the Clean Air Action Plan (CAAP) measure RL-3:

- 1 By 2018, at least 25% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.
- 2 By 2020, at least 95% of BNSF line-haul locomotives entering SCIG and other port properties shall be Tier 4.

The FEIR includes PC AQ-12 which does not commit to the RL-3 “goal” and further does not implement the RL-3 “minimum requirement” for locomotives on port property: 50% Tier 4 by 2023. PC AQ-12 eviscerates RL-3 by allowing BNSF to reduce emissions anywhere in the four-county region, and by any means, in lieu of using Tier 4 locomotives at SCIG. This approach does not address the impacts to the community near and around the SCIG site, and does not require any number of Tier 4 locomotives.

Response to Comment 156-11 in the FEIR is non-responsive. The response states that “Tier 4 locomotives are expected to utilize a new, untested technology that simply does not currently exist at a size adequate for line-haul locomotive engines.” The response includes opinions about the availability of locomotives in 2013 and 2015, but never addresses the availability of locomotives in 2018 or 2020, five years after the standard is implemented. Tier 4 locomotives are currently being tested. In August 2012, General Electric unveiled a prototype that is part of its Evolution Series Locomotives that meets the US EPA’s Tier 4 emission standards. This engine technology is the result of an initial six-year \$400 million investment, followed by a two-year, \$200 million investment to research, design, and engineer locomotive engines to meet Tier 4 emission standards.

The issue is not whether Tier 4 locomotives are feasible today; the issue is feasibility early in the life of the project. Beginning in 2015, the railroads will not be able to buy anything but Tier 4 locomotives because they will be required by federal law. BNSF can route its cleanest locomotives to this region; it is doing this right now with Tier 2 locomotives. Data underlying the EIR analysis assumes a percentage of Tier 4 locomotives in the national fleet that would be sufficient to achieve 95% Tier 4 at SCIG by 2020. Finally, BNSF previously committed to acquire cleaner locomotives years before they were developed.

Response to Comment R156-11 states that “PC AQ-12 San Pedro Bay Ports CAAP Measure RL-3 is not quantifiable or feasible at this time and is not considered mitigation under CEQA to reduce an identifiable impact.” *RL-3 is quantifiable.* The RDEIR used a fleet mix to quantify

locomotive emissions. Page 3.2-37 of the RDEIR states that, “SCIG line-haul locomotive emission factors were modeled using fleet forecasts through 2019 from the 1998 Fleet Average Agreement between CARB and the Class I railroads, and the EPA national locomotive fleet forecast for all years after 2019.” Therefore, PC AQ-12 should be adopted as an enforceable mitigation measure that is required of the project in order to reduce significant impacts.

The fleet mix used to quantify emissions from the proposed project assumed a specific mix of locomotives for each Tier. Along with air dispersion files, the Lead Agency sent an Excel file to the SCAQMD staff titled “Loco EF.xls” which contains two spreadsheets with the locomotive fleet mix before 2020 and on and after 2020. For each locomotive Tier, there is a percentage of the fleet for each specific tier. For example, in 2023 the locomotive emissions are based on a fleet mix that includes 39.5% Tier 4 locomotives. The Lead Agency can revise these spreadsheets to reflect a fleet mix that includes 95% Tier 4 in 2020. Locomotive emissions can then be quantified emissions from implementation of RL-3.

Response to Comment R156-12 was non-responsive. The SCAQMD staff commented in its November 14, 2012 letter that the proposed SCIG facility will “handle between two and three trains per day in 2020, there will only be approximately 12 locomotives (four per train) serving SCIG in the South Coast Air Basin on any given day. These 12 locomotives represent less than 1% of BNSF’s Tier 4 fleet.” Response to Comment R156-12 focused on the number of locomotives that enter and leave California each day stating that “operating procedures require that many hundreds, if not thousands, of locomotives enter and leave California each day.” The point of the SCAQMD’s comment is that the number of locomotives needed for the proposed SCIG facility is very small (less than 1 percent) relative to BNSF’s national locomotive fleet. The RDEIR states in its spreadsheets provided to SCAQMD staff, that the national fleet average will have approximately 26.5% Tier 4 locomotives in 2020. This equates to 1,380 locomotives.

California Air Resources Board staff has estimated that UP and BNSF would need a national pool of up to 5,000 Tier 4 interstate line haul locomotives to ensure that up to 1,200 Tier 4 interstate line haul locomotives will be able to operate in all of California — a ratio of about 4 to 1. <http://www.arb.ca.gov/railyard/ted/drftrec090909.pdf>. Thus, if we assume that BNSF operates 300 line haul locomotives per day in the four-county South Coast region, 1,200 Tier 4 locomotives would be needed nationally (i.e. less than the 1,380 assumed in EIR) to ensure all Tier 4 in the region. Thus, achieving all Tier 4 at just SCIG is *clearly* feasible.

Zero Emission Container Movement

In the Master Response to Comments, the FEIR states a commitment to achieving “100% of the truck moves to proposed and existing near-dock rail-yards by zero-emission trucks by 2020.” (FEIR, pg. 2-32.) Yet, when the Port actually approves a large-scale project with an implementation schedule that extends beyond 2020, it claims that the adoption of a mitigation measure requiring zero-emission trucks is infeasible. As indicated, a mitigation measure is feasible if it can be achieved in a reasonable period of time (CEQA Guidelines § 15364). Operation of the project would not begin until 2016 and full operation will not occur until 2035. (RDEIR, pg. 2-11.) Clearly, the 2020 timeframe identified by the Port is early on in the 2016-2035 implementation phase of project operation. Therefore, even if the Port were correct in

asserting that zero-emission trucks could not be deployed now, they certainly could be deployed within a reasonable time.

There are currently several research and demonstration programs being conducted by the Port of Los Angeles, South Coast Air Quality Management District, California Energy Commission, Environmental Protection Agency and the U.S. Department of Energy, to develop dedicated zero-emission trucks or hybrid electric trucks that will have zero-emission range. Such demonstrations are expected to be completed within the next several years and lay the foundation for commercialized products. The SCAQMD staff believes that the first generation of zero-emission trucks will be available within the next five years, well within the required timeframe.

The mitigation measures proposed for adoption in the RDEIR are inadequate to assure that zero-emission trucks will be required of the project through enforceable mitigation measures. Under CEQA, a mitigation measure must be “required in, or incorporated into, the project.” (Pub. Res. Code § 21081(a); Guidelines § 15091(a).) They must also be “fully enforceable through permit conditions, agreements, or other measures.” (*Federation of Hillside & Canyon Assoc. v. City of Los Angeles* (2000) 83 Cal.App.4th 1252, 1261.) The mitigation measures identified in the MMRP fall short of these principles. Mitigation Measures AQ-9 and AQ-10 do not require the evaluation and adoption of zero-emission technologies under a particular timeframe with consequences to ensure adoption and enforcement of the measures. For instance, MM AQ-9 simply requires the business to review the feasibility of an identified emissions-reductions technology and report back to the port at any time a lease amendment is required or a facility modification is occurring. (FEIR, pg. 2-10.) There is no indication as to when either of these events might occur, let alone by the 2020 timeframe identified by the Port for zero-emission trucks. Contrary to the response to comments, there is nothing in the mitigation measure that would actually require that advancements be implemented upon a five-year review because it is subject to “mutual agreement on operational feasibility and cost sharing.” This is not a fully enforceable requirement. Similarly, MM AQ-10 simply identifies that a new improved technology could replace an existing measure. Again, there is no requirement that the zero emission technology be adopted with certainty in any given timeframe, let alone by 2020. Lastly, PC AQ-11 should be incorporated as a fully enforceable mitigation measure and not simply as a recommendation for inclusion in the agreement.

The Port Failed to Provide Sufficient Information to Support its Emissions Calculations and Modeling thus Depriving the Public of the Ability to Provide Informed Comment

In its November 14, 2012 comment letter, the District explained that from the information provided, “AQMD staff is unable to verify that the modeling analysis corresponds correctly to the emission calculation spreadsheets.” (Comment 156-27.) Moreover, the Port failed to provide the necessary information to determine whether modifications had been performed in the databases. The District provided an example of how the spreadsheets, model inputs, and databases were NOT correlated. The District did not imply that this issue was present for only one particular example, but rather noted that “there are thousands” of sources for which the District was unable to correlate the data. Furthermore, the District explained: “Without the ability to review these calculations, the public and AQMD staff are unable to verify the validity of the modeling analysis.” Moreover, Comment Letter 143, dated February 14, 2012, set forth in detail the inadequacies of the information provided to the District, and requested specific

information that was never provided. This is a serious CEQA violation warranting recirculation of the document after the needed information has been provided.

“[A] prejudicial abuse of discretion occurs if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.” *Association of Irrigated Residents v. County of Madera*, 107 Cal. App. 4th 1383, 1391 (2003). In this case, the District showed that the Port’s analysis was *internally* contradictory. Therefore, the Port was obligated to explain why its analysis was indeed correct. The Port was required to provide “sufficient information and analysis to enable the public to discern the analytic route the agency traveled from evidence to action.” *Id.* at 1397. It failed to do so.

The Port’s response to this issue also failed to comply with CEQA. The Port simply responded to the District’s specific example, in Comment 156-27, without addressing the numerous other cases in which the documents could not be correlated, or even providing a generic explanation which would explain the other cases. In response to the entire modeling comment letter, (Response 143) the Port simply said either that the comment relates to a recirculated portion, or the comment is general, and in either case does not require response. This is an affront to the integrity of the process. In responding to comments, “There must be good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice.” CEQA Guidelines Section 15088(c). Where the District’s comment clearly indicated that the needed data was lacking for all the modeled sources, it is not a good faith response to simply address one source.

Indeed, without the needed data, the public has no way of knowing whether ANY of the emissions information—or the conclusions derived from that information—is correct. This represents a fundamental flaw in the document that renders it so “fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.” CEQA Guidelines Section 15088.5(a)(4). The Port must provide the information needed to allow the public to verify the accuracy of the Port’s calculations, and then recirculate the document to allow public comment. *Id.*

The Port’s Responses to Comments Were Frequently Inadequate

In many cases, the Port attempts to completely avoid its obligation to respond to comments by citing CEQA Guidelines Section 15088.5(f)(2). (*See* responses to the District’s November 30, 2011 comment letter (Response 68), January 19, 2012 comment letter (Response 81), and February 1, 2012 comment letter (Response 126).) This amounts to some 56 pages of comments which the Port claims it may simply ignore.

The Port relies on a CEQA Guideline that applies where only portions of a document are revised and recirculated. The Guideline states that “The lead agency need only respond to (i) comments received during the initial circulation period that relate to chapters or portions of the earlier EIR that were not revised and recirculated, and (ii) comments received during the recirculation period that relate to the chapters or portions of the earlier EIR that were revised and recirculated.” The Port thus responds to *all* of the District’s earlier comments as follows: “This comment refers to a

chapter or section of the DEIR that was recirculated. No response is necessary per CEQA Guidelines Section 15088.5(f)(2).”

The Port has ignored two key portions of Guideline Section 15088.5(f). First, in order for the lead agency to avoid responding to a comment, the relevant portion of the document must be *revised* as well as recirculated. Where the lead agency revises its analysis, it makes sense to require new comments to be filed on the revised analysis. However, where the lead agency does not revise the analysis, the original comment remains relevant and the lead agency must respond to it. Second, the cited Guideline specifically provides that “In no case shall the lead agency fail to respond to pertinent comments on significant environmental issues.” CEQA Guidelines Section 15088.5(f). Therefore, the Port brushes off all of the District’s earlier comments at its peril. Where the comments remain pertinent, the Port must respond to them. The District hereby incorporates by reference its previous comments—which the Port ignored—dated November 30, 2011 (Comment 68), January 19, 2012 (Comment 81), February 1, 2012,(Comment 126), and February 14, 2012 (Comment 143).

Moreover, many of the other responses to comments are inadequate. For example, in Comment 143-1, the District had argued that the two-week extension of time to respond to modeling files was not adequate to allow for full review. The Port’s response was that “The comment is general and does not refer to any specific section of the DEIR or RDEIR therefore no further response is required,” citing Pub. Res. Code Section 21091(d) and CEQA Guideline 15204(a). Leaving aside the fact that neither the cited statute nor the guideline makes that statement, the District’s comment applied to the *entire air quality analysis* and was not “general” because it clearly identified the subject of the comment. To say the comment is too general for response clearly is simply disingenuous. Moreover, the District commented that activity data was not provided, and without the activity data for the thousands of sources in the analysis, it is impossible to determine if modeled pollutant concentrations correspond to the values used in the DEIR. Comment 143-2. Again, the Port claims that it need not respond to this comment because it pertains to a recirculated section of the document—but the Port never provided much of the requested data. (Response 143-2) In response to the District’s request for the needed data, the Port blithely asserts that “the comment is general” and thus does not require any response—even though the type of data sought is regularly provided by other CEQA lead agencies. (See “Technical Analysis is Not Documented and May Not Support Conclusions in Final EIR.”)

Responses 156-6, 156-7, and 156-8, are also inadequate. The Port asserts in each of these Responses that Master Response 7 explains why ZECMS and Tier 4 line haul locomotives are not feasible mitigation measures. However, Master Response 7 fails to explain why Tier 4 line haul locomotives are not feasible for a railyard that will be in operation for many years after EPA’s regulation requires *all* new locomotives to meet Tier 4 requirements. Response 156-11 purports to address this issue, but it simply ignores the EPA requirement and the EPA evaluations of feasibility, relying simply on the statement that the technology “does not currently exist at a size adequate for line-haul engines.”

This statement applies the wrong legal test. The question is not whether a technology currently exists; it is whether it is “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and

technological factors.” Guidelines Section 15364. What is a reasonable period of time may vary depending on the length of time over which a project will be carried out. In this case, the project will be in existence for decades. Given the EPA requirement, the conclusion that Tier 4 locomotives are infeasible merely because the technology “does not *currently* exist” in adequate size is not based on substantial evidence.

The Port Uses the Wrong Legal Test for Determining Feasibility

Master Response 7 related to Zero Emissions Container Movement Systems, also applies the wrong legal test in determining feasibility. The Port states that “while zero emission technologies are promising, zero emission trucks and ZECMS have not yet proven, through demonstration and evaluation, to be feasible in Port operations.” As noted above, the legal test is not whether the mitigation measure is feasible today; it is whether it is feasible in a reasonable period of time. Guidelines § Section 15364. As this project will last for several decades, a reasonable period of time would include a period of several years at least. The District’s comment letters established that even allowing for the demonstration process described in the TIAX Report, zero emission technologies can be commercialized in time for use between the Ports and SCIG by 2016, with 100% deployment by 2020. (*See* Comment 156-8 and attachment B of letter 156.) The Port’s response did not rebut this evidence, but merely called the comment speculative. It is not. It is the expert opinion of the District’s Technology Advancement Office staff, which constitutes substantial evidence. CEQA Guidelines § 15384. Instead, the Port myopically insists that a ZECMS be “fully demonstrated” before it can be considered feasible. (Master Response 7, p. 2-32) This approach improperly ignores the fact that there is ample time to complete the demonstrations required during the period when the project becomes fully operational. It improperly requires that the project be capable of successful implementation today, rather than “within a reasonable period of time”, which is the proper legal test.

The Port Uses an Improper Baseline for Criteria Pollutant Emissions

The Port fails to adequately respond to the District’s comment that the Port should have used a floating baseline rather than a static “year 2010” baseline for criteria pollutant emissions to evaluate significance of criteria pollutant impacts. (Comment 156-26) This comment needs to be considered in conjunction with the more detailed comments regarding this issue that were filed on the DEIR. (Comments 68 and 81) Those comments incorporated the argument that using the static baseline of emissions in the year 2010 improperly credits the project with emission reductions that will occur anyway and are not due to the project. Thus, the issue purportedly discussed in Master Response 2 (Adopted Regulations) is really a part of the baseline issue. The Port has misunderstood our argument regarding the role of adopted regulations in the analysis.

Master Response 2 contends that the Port correctly included adopted regulations in its analysis of the project impacts. In other words, when the Port predicts the future emissions resulting from the Project, it assumes that the Project will comply with applicable regulations. We do not disagree with this proposition. We disagree, however, that those future emissions should be compared with a static baseline consisting of existing emissions as of 2010. What the Port has done is compare existing conditions, *before* the implementation of adopted but future effective regulations, with future conditions *after* implementation of adopted regulations, and pretended that the benefits of adopted regulations are due to the project, where in fact they would occur

anyway. This approach has the potential to obscure significant adverse impacts of the project. The District's November 30, 2011, and January 19, 2012 letters explained the problems with this approach —yet as discussed above, the Port simply ignored these comment letters.

The Port's approach is analogous to a case where a facility emits 1000 tons per year in 2010, but in the future, due to adopted rules, its emissions will go down to 500 tons. The facility proposes a modification that will increase its future emissions to 750 tons per year. By comparing the future emissions (750 tons per year) with 2010 emissions (1000 tons per year) it appears that the modification provides an environmental benefit, where actually it results in a 250 ton per day emissions increase. In the unique area of air quality, if activity remains constant, emissions will go down in the future due to adopted rules and fleet turnover. To discern the true impacts of the Project, the Port needs to use a future baseline which would evaluate emissions in the future with the project compared to emissions in the future without the Project. The Port should use a 2010 baseline as well, and consider impacts to be significant if they are significant using either baseline.

The Port argues that it did in fact perform an analysis of the comparison between the Project and the no-project alternative. (Master Response 1 p. 2-14) However, it did not use this as one of the baselines for determining significance. Moreover, as noted elsewhere in these comments, the District has serious questions about the correctness of the Port's analysis, and has been deprived of the information needed to judge that correctness.

The Port's Responses Improperly Limit its Own Legal Authority

In Response 156-18, the Port addresses the District's request that the Port as lead agency limit access to the SCIG rail yard to only locomotives that meet Tier 2 engine rebuild or above emission levels. The Port's response never claims this would be technically, economically, or operationally infeasible. Instead, the response merely snipes at the District by arguing that the District lost a case in which it was held that federal preemption precluded the regulations at issue. The response neglects to mention that the Ninth Circuit Court of Appeals held that if the rules had been approved by EPA into the State Implementation Plan, they would generally not be preempted. The District and CARB have submitted the rules to EPA for inclusion in the state implementation plan. The response essentially says that the Port has no legal ability to require the railroads to comply with such a measure. We find it difficult to believe that this response reflects the "independent judgment" of the Port (CEQA Guidelines Section § 15084(e)).

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

Inconsistent use of Hobart in the Baseline, No Project, and Proposed Project

As we identified in our November 14, 2012 comment letter, CEQA obligates a lead agency to analyze the whole of an action with the potential for resulting in a direct or reasonably foreseeable indirect physical change in the environment (CEQA Guidelines § 15378(a)). Here, the Port has chosen to evaluate SCIG as part of a system that includes Hobart for only a limited portion of the analysis, namely the baseline and the no project alternative and meanwhile chose to ignore full activity at Hobart when analyzing the impacts of the project. As a result, the project looks artificially beneficial to regional air quality, a position which is untenable and defies common sense.

BNSF, in their November 28, 2012 letter to the Port, identifies that the Hobart rail yard is one of the largest intermodal rail yards in the United States and currently receives half of its cargo from the ports and the remainder from domestic and transload cargo from various points in Southern California. (Pg. 1.) With the SCIG project, only 5% of international intermodal cargo will pass through Hobart. Thus, SCIG would clearly allow for Hobart to receive and deliver a greater volume of domestic and transload cargo, unless one were to assume that one of the largest intermodal rail yards in the country would operate well below capacity.

However, instead of analyzing the potential impacts associated with a greater percentage of domestic and transload activity in Hobart, with originating and destination points throughout Southern California, rather than the fixed distance to the Port, the RDEIR claims that any such change at Hobart is unrelated to the project. Specifically, the Port claims, “future changes associated with rail and vehicular traffic outside the rail routes between the Ports and Hobart would not be caused by the proposed project and are beyond the geographic scope of the impact analysis.” (SCIG Final EIR, pg. 2-18.) The Port and BNSF claim that this is because SCIG and Hobart are simply accommodating growth that is occurring irrespective of the Project.

This position advanced by the Port and BNSF is similar to a builder of tract homes claiming that the population of Southern California will grow irrespective of the decision to build homes in a given location and thus the impacts of building those homes need not be evaluated. Clearly that argument would run counter to CEQA. For similar reasons, the Port’s position is equally untenable. This logic fails to take into account that the SCIG project does impact where that growth will occur and also controls the resultant pattern on the rail transportation network. Thus, even if cargo growth is unrelated to SCIG, it cannot be ignored that SCIG is controlling the flow of that cargo by increasing capacity near the ports and allowing for an increased capacity at Hobart. The direct and indirect impacts of that increased capacity at SCIG and Hobart must be analyzed as part of the same project. By not analyzing the impacts at Hobart, the RDEIR fails to analyze the whole of the project and therefore underestimates project impacts, in direct violation of CEQA. (*See, Association for a Cleaner Environment v. Yosemite Community College Dist.* (2004) 116 Cal. App. 4th 629, 637-41.) It is particularly important that the FEIR analyze the potentially significant physical impact on the environment from the increased domestic transload activity because, as BNSF acknowledges, it is likely that any potential physical changes at Hobart will not require any discretionary approval requiring CEQA review. As a result, this is the only opportunity to mitigate those impacts.

In their letter, BNSF also states that increases at Hobart in the past have not resulted in changes in demand for intermodal rail movements. By way of example, they claim that the year with the highest activity thus far, 2007, which had 1.37 million lifts was accommodated by improvements to the system. However, the growth projection is 2.9 million lifts at Hobart, without SCIG. BNSF seems to acknowledge that this growth would likely require actual facility developments and technological advances. (BNSF letter, pg. 4.) The discussion of the no project alternative in the RDEIR does not contain sufficient evidence to establish that Hobart would definitely be developed to accommodate such growth in international cargo and domestic transload activity rather than have the increased cargo growth dispersed amongst other rail yards in the rail transportation network. In other words, the RDEIR does not explain why the projected growth must come to Hobart, with or without SCIG, rather than travel to other rail yards that may or may not be located within the South Coast Air Basin. It would seem that, at the very least, SCIG is assisting in ensuring that growth will be targeted in this already highly impacted area within the Basin. It must be remembered that while the international cargo travels a distance between the ports and Hobart that is approximately 24 miles, the domestic and transload cargo travels to and arrives from points throughout the region and would thus have greater air quality emissions associated with that greater distance.

Before the Port decides to approve a project that will help ensure that future growth in cargo is directed towards this region, that the impacts of that decision are fully analyzed and mitigated to the greatest extent feasible.

Lastly, Appendix G4 of the EIR shows that while Hobart will have capacity to handle extra domestic and transload containers, other rail yards will be at or over capacity in future years. Given the capacity constraints at other yards, the newly opened capacity at Hobart would allow for additional activity and shifting of containers to a less congested facility.

Locomotive Activity Along the San Pedro Branch Line Adjacent to Sensitive Receptors

The SCAQMD staff is disappointed with the Lead Agency's response. The proposed Project will increase locomotive activity on the San Pedro Branch Line in an area that is adjacent to sensitive receptors including homes and schools. The SCAQMD staff understands that the Lead Agency did not find a significant impact and under CEQA is not obligated to implement mitigation. However, the SCAQMD staff strongly encourages the Lead Agency to consider measures to reduce the exposure of diesel exhaust to residents, students, and other sensitive populations by avoiding whenever possible locomotive activities along this track during times when children are expected to be outside, including lunch periods, recesses, and other times that the school district may identify. In addition, the Lead Agency could place signs notifying train personnel that there are school children and to limit unnecessary idling. In addition, there should be strict monitoring and enforcement of locomotive activity along this line to ensure that idling is kept to a minimum and does not exceed estimates in the EIR.

Technical Analysis May Not Support Conclusions in Final EIR

As we previously expressed in our comment, without the ability to review these calculations, the public and SCAQMD staff are unable to verify the validity of the modeling analysis. We are particularly concerned by this because the modeled concentrations provided in the modeling output files and databases do not correspond to the values presented in the text of the Final EIR

and its appendices. For example, in Table 3.2-28 of the EIR, the max NO₂ 1-hour modeled concentration is reported as 745 µg/m³ for the state standard and 518 µg/m³ for the federal standard. From the modeling files provided to SCAQMD staff, the 1-hour NO₂ concentration at the maximum offsite receptor for the mitigated project is 1,157 µg/m³ (at a receptor located at 386100E, 3738950N). It is unclear to SCAQMD staff how the reported 745 µg/m³ correlates to the modeled 1,157 µg/m³. This difference in values represents a substantial difference in the severity of the reported impact.

This misreporting of results goes beyond potential typographic errors within the text of the EIR. The below example details the impact of missing emission calculations for the reported 1-hour No Project emission rate for Cal Cartage cargo handling equipment (the source name is CCBASE). Of the hundreds of emission sources modeled in the EIR for the No Project alternative, CCBASE is the largest contributor to NO₂ impacts at Hudson Elementary School, representing approximately 45%.

In the file titled 'No Project – Criteria Concentration.accdb', emission rates are listed for each modeled source. These emission rates are used to determine the modeled pollutant concentrations by multiplying the emission rate by a dispersion factor found in a file titled 'Dispersion Factor – other.accdb'. The dispersion factor multiplied by the emission rate should equal the final modeled concentration used to determine the significance of air quality impacts. SCAQMD staff is able to correlate these calculated concentrations with the reported concentrations found within the 'No Project – Criteria Concentration.accdb' file. However, the emission rates in this file cannot be correlated with any emission calculation spreadsheets.

For example, the emission rate for CCBASE for 1-hour NO_x is listed as 2.759 grams per second. This is equivalent to 525.535 pounds per day as shown in the equation below.

$$525.535 \text{ lb/day} = 2.759 \text{ g/s} * 60 \text{ s/min} * 60 \text{ min/hr} * 24 \text{ hr/day} / 453.59 \text{ g/lb}$$

Because this source of emissions is tied to the operating hours of Cal Cartage (76 hours per week), the average pounds per day should only be approximately 237.719 pounds per day as shown below.

$$237.742 \text{ lb/day} = 525.535 \text{ lb/day} * 76 \text{ operating hours/week} / 168 \text{ total hours/week}$$

Given the above analysis, SCAQMD staff expects to find the value of 237.742 lb/day within the emission calculation spreadsheets provided with the EIR. We could not find this value in any spreadsheet. The most likely value we could identify was in the '2035 Avg&Peak Daily' worksheet within the spreadsheet titled 'Summary NP Annual & Peak Emissions_All Years_06.26.12.xls'. Within this table is listed the "Total Peak Daily Emissions [lb/day]" for all existing businesses on the SCIG site. Cell Z16 lists the emission rate for cargo handling at Cal Cartage as 36.308 lb/day. SCAQMD staff believes this is the correct table to use as the sum of emissions from all cargo handling equipment from this table is equivalent to the value of 50.54 shown in Table C1.2-NP-22 from Appendix C1.

This rate of 36.308 lb/day is approximately 6.5 times lower than the rate of 237.742 lb/day listed above. Without any further information, SCAQMD staff concludes that the No Project emissions from the single largest source at Hudson Elementary are substantially overestimated thus making the No Project alternative concentrations appear much worse than they should. To be clear, these mismatches between emission calculations and modeled emissions appear to be systematic throughout the entire modeling analysis for all alternatives and SCAQMD staff must conclude that the air quality significance impacts are not adequately supported by the information provided in the EIR or its supporting files.

Proposed ICTF Project Not Adequately Addressed in Cumulative Impact Analysis

The ICTF rail yard is located adjacent to the proposed SCIG project to the north and is proposing to expand its operations to handle up to 1.5 million containers per year (NOP released January 2009). While the cumulative impacts of adding SCIG and expanding ICTF were quantitatively treated in the Draft EIR, the Recirculated Draft EIR removed this analysis. It is not clear that the cumulative air quality analysis from the Draft EIR would still be valid given the updated baseline year and the use of a floating baseline in the Recirculated Draft EIR. The minimal treatment of this significant cumulative impact in the Recirculated Draft EIR potentially diminishes the severity of the impacts that this local community will experience.

Further, conclusory statements in the Recirculated Draft EIR cumulative impacts chapter do not provide meaningful disclosure for the public or decision makers regarding the severity of the impact of these two substantial rail yards being located adjacent to one another, and residences and schools. For example, the EIR relies on statements like those found on page 4-28 to determine significance *“Although there is no way to be certain if a cumulative exceedance of the thresholds would happen for any pollutant without performing dispersion modeling of the other projects, previous experience indicates that cumulative air quality impacts would be likely to exceed the thresholds for NO_x, could exceed the thresholds for PM₁₀ and PM_{2.5}, and would be unlikely to exceed the thresholds for CO.”* While the Draft EIR attempted to demonstrate the severity of these impacts, the Recirculated (and hence Final) EIR omit this consideration. Decision makers and the public need to know the severity of this cumulative impact when considering the feasibility of mitigation and whether the benefits of the project outweigh the impacts.

Student Exposures

The EIR presents potential carcinogenic health risks for student populations based on a set of exposure parameters that are not appropriately conservative. While Figures 3.2-10, 11, and 12 in the EIR show risks with residential exposures for the identified school sites, the exposures for students are limited to 6 years, 6 hours per day, and 180 days per year within Table 3.2-35. This exposure period is less than the minimum 9-year exposure duration recommended by Cal-EPA Guidance, and is also lower than the typical exposures experienced by students adjacent to the proposed project. Hudson Elementary is in fact a K-8 school, and students from this school are likely to attend Cabrillo High School just next door that has similar impacts. Students also frequently stay at schools for longer periods for extra-curricular activities in the afternoons or during the summer. The HRA should report student risks that at minimum account for these realistically longer exposures, if not using a residential exposure typical applied to sensitive land uses.



South Coast Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

Via Email

March 20, 2013

Los Angeles Board of Harbor Commissioners
Port of Los Angeles
425 South Palos Verdes Street
San Pedro, CA 90731

Dear Harbor Commissioners:

Re: Agenda Item 7-Lease Agreement with BNSF Railway Company regarding the Southern California International Gateway (SCIG)

The South Coast Air Quality Management District (SCAQMD) is writing in reference to Agenda Item 7 of your March 21, 2013 agenda approving the Site Preparation and Access Agreement (SPAA) and Permit No. 901 with the BNSF Railway Company regarding the Southern California International Gateway (SCIG) project. In providing the following comments, we wish to incorporate by reference the CEQA deficiencies we identified in our previous comment letters dated November 30, 2011, January 19, 2012, February 1, 2012, February 14, 2012 and March 6, 2013, identifying a lack of adequate and enforceable mitigation for significant air quality impacts, among other issues.

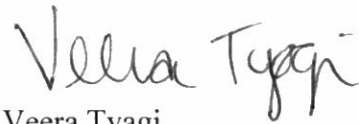
In addition, we are concerned that the language in Permit No. 901 does not reflect the intent of this Board in their discussion at the March 7, 2013 approval of the Final Environmental Impact Report (FEIR) for SCIG. Specifically, the Board discussed that there should be opportunities for the Port to require BNSF to implement new feasible technologies during the lease term. The current lease, however, has a similar deficiency as Mitigation Measure AQ-9, in that it fails to require a lease amendment or other mechanism, which would actually require BNSF to conduct new technology reviews and implement feasible technologies through enforceable mechanisms. Indeed, it is likely that the lease would never be amended so as to provide an opportunity to require new technologies. It is essential that the lease, which has a term of forty-five years, include terms that allow the Port to require BNSF to adopt new technologies as they become feasible during the life of the lease, as is contemplated in the FEIR.

Furthermore, as you are undoubtedly aware, the March 7, 2013 approval by the Harbor Commissioners of the Final Environmental Impact Report (FEIR) for SCIG has already been appealed administratively to the City of Los Angeles City Council and is still within the 30-day appeal period identified by this Board at the hearing on the FEIR. An approval that is subject to an administrative appeal is not final until the appeal is resolved and therefore a permit may not be issued in reliance on that environmental document. The Order that is included as part of the staff report, identifies that this Order will be deemed approved within 30 days from when it is

presented to the City Council so long as the City Council does not affirmatively disapprove the Order. The SPAA and Permit No. 901 cannot be deemed approved until the City Council has made a decision on the administrative appeal. Such a result would not only fail to comply with the requirements of CEQA, but would also result in the inability of the City Council to modify any mitigation measures in response to the concerns raised in the appeal, thereby negating the purpose of the appeal.

Therefore, the SCAQMD requests that the Board refrain from taking any action on the SPAA or on Permit No. 901 until the City Council has made a decision on the administrative appeal. If you have any questions or concerns, please feel free to contact me at (909) 396-2306

Sincerely,

A handwritten signature in black ink that reads "Veera Tyagi". The signature is written in a cursive style with a large, stylized "V" at the beginning.

Veera Tyagi
Senior Deputy District Counsel