



# South Coast Air Quality Management District

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October 31, 2014

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## **Draft Environmental Impact Report (DEIR) for the Proposed Citrus Commerce Center Project (SCH. NO. 2014051005)**

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The following comments are meant as guidance for the Lead Agency and should be incorporated into the Final CEQA document.

The proposed Project includes concrete tilt-up type construction of four logistics warehouse buildings totaling approximately 2.171 million square feet on approximately 107.56 acres. The project will be built on three component sites in three phases: Phase 1 - the Near-Term Development Site – Construction of three buildings on 77.56 acres; and Phase 2 - the Long-Term Development Site – Construction of a fourth building on about 10 acres; and Phase 3 - the Long Term Park Site – Construction of an active park with four soccer fields on an approximate 20 acre site. Based on recommended guidance from the Institute of Transportation Engineers (ITE),<sup>1</sup> the proposed Project could have as many as 1,390 daily trucks operating at full-project buildout beginning in year 2022.

Construction for Phase 1 (the three warehouse buildings) will begin approximately in January 2015 and be completed about November 2016 with operations beginning in 2017. The Long-Term Developments, the fourth warehouse building and the soccer field park, are not scheduled to begin construction until about 2021 ending in year 2022.

Since the proposed Project involves a General Plan Amendment, Change of Zone, and Specific Plan Amendment from Residential to Light Industrial, the SCAQMD staff has concerns about the significant adverse long-term air quality impacts estimated in the DEIR to existing sensitive receptors (residences along with students, teachers and administrative staff at Jurupa Hills High School) near the proposed Project site and along truck routes from high truck activities described in the air quality and traffic analyses. The SCAQMD staff therefore recommends that all feasible mitigation measures including a 1,000 foot buffer between the on-site truck activities and the sensitive

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<sup>1</sup> ITE, 9<sup>th</sup> Edition, Land Use 152 High-Cube Warehouse/Distribution Center 152, Weekday Weighted Average Truck Trip Generation Rate of 0.64 trip ends per 1,000 square feet.

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receptors be incorporated into the final Project and Final EIR to reduce these impacts. The SCAQMD staff also has concerns about the assumptions used in the modeling to estimate regional, localized and health effect impacts. Additional details are included in the attachment.

Pursuant to Public Resources Code Section 21092.5, SCAQMD staff requests that the Lead Agency provide the SCAQMD with written responses to all comments contained herein prior to the adoption of the Final EIR. Further, staff is available to work with the Lead Agency to address these issues and any other questions that may arise. Please contact Gordon Mize, Air Quality Specialist CEQA Section, at (909) 396-3302, if you have any questions regarding the enclosed comments.

Sincerely,

*Jillian Baker*

Jillian Baker, Ph.D.  
Program Supervisor  
Planning, Rule Development & Area Sources

Attachment

JB:GM

SBC140923-04  
Control Number

### **Siting of an Incompatible Land Use**

1. The SCAQMD staff is concerned that the existing sensitive receptors will be exposed to significant regional and localized operational impacts, mostly from the daily truck activities that will likely operate using diesel fuel. Currently, the proposed Project site is designated and zoned for residential development that does not allow exposure to emissions generated by industrial sources. The proposed General Plan Amendment, Changes of Zone, and Specific Plan Amendment will result in a land use change from residential to light industrial exposing the existing sensitive receptors to significant adverse air quality impacts from activities that are currently precluded by the existing zoning. Sensitive receptors living next the proposed Project site that are exposed to emissions from on-site truck activities (trucks entering the site, queuing before loading and unloading and exiting the site) and sensitive receptors along the truck routes will also be exposed to diesel particulate matter emissions that are determined by the California Air Resources Board (CARB) to be carcinogenic (something that is directly involved in causing cancer).

Based on information in the DEIR (air quality analyses, the project truck distribution, or by aerial map inspection), the Lead Agency shows a minimum distance of 40.5 meters (approximately 133 feet) to the nearest sensitive receptor; a residence located northeast of the intersection of Santa Ana and Citrus Avenue and north of the project site.<sup>2</sup> The entire proposed Project site is also essentially located within 1,000 feet of existing sensitive receptors surrounding the project site: single-family residences north, south, east and west of the proposed Project site and Jurupa Hills High School is north of Santa Ana Avenue, less than 700 feet from the proposed site. In addition, although approved as designated truck routes in the Lead agency's Circulation Element in its General Plan, project truck traffic will pass by sensitive receptors daily using Jurupa, Oleander, Santa Ana and Citrus Avenues to access the Interstate 10 Freeway (I-10 Freeway). As a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land-use decision making process, the California Air Resources Board (CARB) has provided the CARB Air Quality and Land Use Handbook (CARB Land Use Handbook). Based on guidance from the CARB Land Use Handbook, CARB recommends a buffer of at least 1,000 feet between land uses that will have 100 or more trucks per day.<sup>3</sup>

In accordance with the state CEQA Guidelines §15126.4 (a)(1)(D), the Lead Agency should discuss the proposed siting of this land use and any potential impacts resulting from any proposed mitigation related to the CARB Land Use Handbook guidance in the Final EIR.

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<sup>2</sup> Mobile Source Health Risk Assessment, Page 7.

<sup>3</sup> CARB Air Quality and Land Use Handbook: <http://www.arb.ca.gov/ch/handbook.pdf> . Guidance is for siting new sensitive land uses within 1,000 feet of a distribution center, Page 4. The buffer is a neutral mitigation measure provided to minimize truck activity emission impacts to sensitive receptors. Besides truck activity of more than 1,000 trucks per day, this guidance applies to distribution centers that accommodate more than 40 transport refrigeration units per day or where TRU operations will exceed 300 hours per week truck activities and sensitive receptors, Page 4.

## **Air Quality Analyses**

### **Localized Significance Thresholds (LST) Analysis**

2. The American Meteorological Society/Environmental Protection Agency Regulatory Model Improvement Committee (AERMIC) was formed to introduce state-of-the-art modeling concepts into the Environmental Protection Agency's (EPA) air quality models. Through AERMIC, a modeling system, Atmospheric Dispersion Modeling System (AERMOD), was introduced that incorporated air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. As of December 9, 2006, AERMOD is fully promulgated as a replacement to ISC3, in accordance with EPA guidance.<sup>4</sup> AERMOD is a steady-state plume model that incorporates air dispersion based on planetary boundary layer turbulence structure and scaling concepts, including treatment of both surface and elevated sources, and both simple and complex terrain. AERMOD-ready meteorological data for various meteorological stations within the South Coast Air Basin (SCAB) are available for download free of charge at the SCAQMD website.<sup>5</sup> The Lead Agency used AERMOD (version 12345) to prepare the dispersion modeling for the Health Risk Assessment (HRA) but used SCREEN3, which is the screening level version of ISC to perform the LST dispersion modeling analysis. Given that AERMOD is the US EPA's recommended model for dispersion modeling, SCAQMD staff recommends that the Lead Agency revise the LST analysis using the latest version of AERMOD (version 14134).
3. On Page 55 of the Air Quality Impact Analysis, the Lead Agency states that the nearest sensitive receptor is located 25-meters away, yet the next paragraph states that the nearest sensitive receptor is located 30-meters away. The SCAQMD staff recommends the Lead Agency revise the LST analysis using AERMOD because AERMOD has the ability to model the conversion of NO<sub>x</sub> to NO<sub>2</sub> and graphically place receptor grids over the location of existing and future sensitive receptors, which will correct this discrepancy.

### **Truck Trips Rate/Vehicle Fleet Mixture Percentages**

4. For high cube warehouse projects, the SCAQMD staff has been working on a Warehouse Truck Trip Study to better quantify trip rates associated with local warehouse and distribution projects, as truck emissions represent more than 90 percent of air quality impacts from these projects. Details regarding this study can be found at the SCAQMD website.<sup>6</sup>

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<sup>4</sup> EPA Website: [Appendix W \(http://www.epa.gov/ttn/scram/dispersion\\_prefrec.htm\)](http://www.epa.gov/ttn/scram/dispersion_prefrec.htm)

<sup>5</sup> SCAQMD website: <http://www.aqmd.gov/home/library/air-quality-data-studies/meteorological-data/data-for-aermod>

<sup>6</sup> <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/high-cube-warehouse>.

As an interim measure, SCAQMD staff is recommending that Lead Agencies use truck trip rates from the Institute of Transportation Engineers (ITE) for analysis of air quality impacts from high cube warehouse projects located in SCAQMD. In the Air Quality Impact Analysis, the Lead Agency uses the Institute of Transportation Engineers Trip Generation Manual (9<sup>th</sup> Edition) (ITE Manual) to determine the overall trip generation rate (cars + trucks) for the proposed Project, but does not use the truck trip rate from this same reference.

In the Traffic Impact Analysis (Traffic Study), the Lead Agency states that “the ITE Trip Generation manual includes very limited data regarding the types of vehicles that are generated (passenger cars and various sizes of trucks)”<sup>7</sup> and used the vehicle mix in the City of Fontana Truck Trip Generation Study (Fontana Study). In the Traffic Study, the Lead Agency acknowledges that the Fontana Study utilized a small sample size and that the ITE Manual trip generation rates would be more conservative. The Fontana Study evaluated four warehouses (two of which do not have complete data), whereas the SCAQMD study evaluated 34 warehouses. The results from this larger sample size are consistent with the ITE recommended rate. Therefore, in order to ensure that the EIR conservatively evaluates the potential for air quality impacts, including peak day impacts (consistent with SCAQMD guidance), the Lead Agency should utilize the ITE Manual trip generation rates for both vehicles and trucks. On Page 267 of the ITE Manual, the trip generation rate for truck trips is listed as 0.64 per 1,000 square feet of gross floor area for High-Cube Warehouse/Distribution Centers (ITE Land Use 152). This value is higher than the 0.34 per 1,000 square foot truck rate the Draft EIR derives by using the Fontana Study. In order to determine the truck subcategories, the Final EIR should use the 2-axle, 3-axle, and 4+-axle percentages derived from the SCAQMD study<sup>8</sup>. The final truck trip rates for subcategories utilized in CalEEMod should therefore be: LHD1 = 0.14, LHD2 = 0.0, MHD = 0.11, HHD = 0.39.

### **Health Risk Assessment (HRA)**

5. In August 2012, the Office of Environmental Health Hazard Assessment (OEHHA) released the Technical Support Document for Exposure Assessment and Stochastic Analysis, which incorporates scientific advances in the field of exposure assessment and newer data on exposure variates. OEHHA reassessed exposure variates for children to ensure that the impacts to children were not underestimated, as mandated by SB-25. OEHHA had concluded earlier that the potency of carcinogens and cancer risk varies based on the lifestage at exposure. Recognizing OEHHA’s emphasis on the cancer risks from exposure to carcinogens in the early stages of life, in addition to the many studies which have shown a strong correlation between exposure to diesel PM and reduced lung function and increased respiratory problems, SCAQMD staff is concerned about the health risks to the residents and the students that are near the proposed Project and along the truck route to the proposed Project, who will likely be

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<sup>7</sup> Appendix L, Traffic Impact Analysis, Page 63.

<sup>8</sup> <http://www.aqmd.gov/docs/default-source/ceqa/handbook/high-cube-warehouse-trip-rate-study-for-air-quality-analysis/finalswwg071714backup.pdf>

exposed to diesel particulate Matter (DPM), a known carcinogen, emitted from the trucks generated by the proposed Project. Many of the students likely live in the vicinity of the high school, so their exposure to DPM emissions is not merely from the four years they will attend the high school, but from the third trimester of pregnancy onwards. Based on the Traffic Study, most of the trucks generated by the proposed Project will travel north along Citrus Avenue towards the Interstate-10 (I-10) freeway. There are existing residential receptors as well as the Jurupa Hills High School located along Citrus Avenue. Further, the high school stadium (containing a football field and track) and baseball fields are also located adjacent to Citrus Avenue, with the classrooms approximately 250-meters from Citrus Avenue.

6. The SCAQMD staff is therefore concerned that the DEIR has under-estimated the cancer risk impacts to residents and the school (students, faculty and administrative staff) from the proposed Project's generated diesel particulate matter emissions. Based on a review of the input files, the Lead Agency placed one receptor at each school location, while ignoring the portion of school property which is much closer to the sources of emissions from the proposed Project. Furthermore, the AERMOD input files for the school used the emission rates for the residential scenario, which are lower than that for the school. SCAQMD staff recommends that the Lead Agency revise the Health Risk Assessment (HRA) to include a receptor grid of no more than 100-meter spacing placed over the entire school property (includes classrooms, stadium,, baseball fields, etc) and use the correct emission rates in order to properly analyze and characterize the cancer risk impacts to the school.
7. Similarly, the HRA analysis for both the resident and worker receptor involved the use of separate discrete receptors placed randomly. SCAQMD staff recommends that the Lead Agency revise the HRA using a receptor grid over the existing residences and areas zoned or planned for residential development, in order to ensure that the maximum impacts to a residential receptor are properly analyzed.
8. In the HRA, the Lead Agency used meteorological data from the San Bernardino station, which is located 11 miles northeast of the proposed Project site. The SCAQMD's Fontana station is located 4 miles north west of the proposed Project site and would be the more appropriate station to use. SCAQMD staff recommends the Lead Agency update the dispersion modeling performed for the LST and HRA analyses using the Fontana station.
9. In the HRA, the Lead Agency only used one year of meteorological data from the San Bernardino station for the analysis. If the Lead Agency chooses to only use one year of meteorological data, the Lead Agency must first do an analysis to see which one year will result in the highest impacts. Alternatively, for HRAs, the Lead Agency can run all 5-years of available meteorological data using the Period option in AERMOD to get the appropriate concentration to use in the estimation of health risks. The SCAQMD staff recommends that the Lead Agency either perform an analysis to identify the one year, which will result in the highest annual concentration or revise the HRA using the entire 5-years of meteorological data.

10. In the HRA modeling analysis, the Lead Agency identified the various schools as “school receptors” and used a nine-year exposure duration. However, worker receptors (teachers and administrative staff, etc.) were not identified in the modeling analysis. Worker receptors placed on school property should therefore be identified and evaluated for a 40-year exposure period in the Final EIR.

#### **Use of Un-Refrigerated Warehouse Without Rail Land Use Model Input**

11. Based on a review of the project’s emissions calculations in Appendix C: Air Quality Analysis<sup>9</sup> (CalEEMod Output Sheets), the Lead Agency determined the proposed Project’s air quality impacts using emission factors for unrefrigerated warehouses/truck activity. However, in mitigation measure MM-4.3.B-10 to reduce Operational Emissions starting on Page 4.3-55, the Lead Agency refers to the use of Transportation Refrigeration Units (TRUs) at the project site. The SCAQMD staff therefore recommends that the Lead Agency include a mitigation measure that precludes the use of refrigerated warehousing at the Project site or revise the air quality analysis to account for emissions from refrigerated warehouse uses. Further, if the Lead Agency chooses to include refrigerated warehouses in the air quality analysis then MM-Air-4 should be incorporated into the project and remain in the Final EIR.
12. In addition, page 3-4 in the project description includes the intent to rezone portions of the development sites (the Long Term Development Site and the northern portion of the Near Term Development site), pursuant to a proposed Specific Plan Amendment to provide expansion of project activities supported by truck routes and an existing rail spur located to the west of the project site. Since emissions from additional rail traffic (diesel-powered locomotive engines) related to the increased activity from the proposed Project were not estimated in DEIR’s regional, localized and health effect analyses, the Lead Agency should also include a mitigation measure that precludes the use of rail at the project site or revise the air quality analysis in the Final EIR to account for emissions from expected rail traffic.

#### **Mitigation Measures for Operational Air Quality Impacts (Mobile Sources)**

13. Because the California Air Resources Board has classified the particulate portion of diesel exhaust emissions as carcinogenic and during project operations, the Lead Agency has determined that project operation emissions are significant for Volatile Organic Compounds (VOC) and Oxides of Nitrogen (NOx), primarily from truck activity emissions, the SCAQMD staff therefore recommends the following changes and additional measures that should be incorporated in the Final DEIR to reduce exposure to sensitive receptors and reduce potential significant project air quality impacts:

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<sup>9</sup> Appendix 3.1: CalEEMod Emissions Model Output.

Recommended Changes:

Mitigation 4.3.B-10

- ~~Encourage~~Require all fleet vehicles to conform to the use of 2010 air quality standards or better-compliant trucks, or alternatively fueled, delivery trucks (e.g., food, retail and vendor supply delivery trucks) at commercial/retail sites upon project build-out. If this isn't feasible, consider other measures such as incentives, phase-in schedules for clean trucks, etc. Users shall maintain compliance through normal course of business. Any spaces utilizing refrigerated storage, including restaurants and food or beverage stores, shall provide an electrical hookup for refrigeration units on delivery trucks. Incapable of utilizing the electrical hookup powering refrigeration shall be prohibited from accessing the site.

Mitigation 4.3.B-13

- The Project Proponent shall provide a minimum of two electric vehicle charging stations that are accessible for trucks.

Discussion

- Trucks that can operate at least partially on electricity have the ability to substantially reduce the significant NOx impacts from this project. Further, trucks that run at least partially on electricity are projected to become available during the life of the project as discussed in the 2012 Regional Transportation Plan. It is important to make this electrical infrastructure available when the project is built so that it is ready when this technology becomes commercially available. The cost of installing electrical charging equipment onsite is significantly cheaper if completed when the project is built compared to retrofitting an existing building. Therefore, the SCAQMD staff recommends the Lead Agency require the proposed warehouse and other plan areas that allow truck parking to be constructed with the appropriate infrastructure to facilitate sufficient electric charging for trucks to plug-in. Similar to the City of Los Angeles requirements for all new projects, the SCAQMD staff recommends that the Lead Agency require at least 5% of all vehicle parking spaces (including for trucks) include EV charging stations<sup>10</sup>. Further, electrical hookups should be provided at the onsite truck stop for truckers to plug in any onboard auxiliary equipment. At a minimum, electrical panels should appropriately sized to allow for future expanded use.

Additional Mitigation Measures:

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<sup>10</sup> [http://ladbs.org/LADBSWeb/LADBS\\_Forms/Publications/LAGreenBuildingCodeOrdinance.pdf](http://ladbs.org/LADBSWeb/LADBS_Forms/Publications/LAGreenBuildingCodeOrdinance.pdf)



- Provide minimum buffer zone of 300 meters (approximately 1,000 feet) between truck traffic and sensitive receptors.
- Limit the daily number of trucks allowed at each facility to levels analyzed in the Final EIR. If higher daily truck volumes are anticipated to visit the site, the Lead Agency should commit to re-evaluating the project through CEQA prior to allowing this higher activity level.
- Design the site such that any check-in point for trucks is well inside the facility to ensure that there are no trucks queuing outside of the facility.
- On-site equipment should be alternative fueled.
- Provide food options, fueling, truck repair and or convenience stores on-site to minimize the need for trucks to traverse through residential neighborhoods.
- Improve traffic flow by signal synchronization.
- Have truck routes clearly marked with trailblazer signs, so that trucks will not enter residential areas.
- Should the proposed Project generate significant regional emissions, the Lead Agency should require mitigation that requires accelerated phase-in for non-diesel powered trucks. For example, natural gas trucks, including Class 8 HHD trucks, are commercially available today. Natural gas trucks can provide a substantial reduction in health risks, and may be more financially feasible today due to reduced fuel costs compared to diesel. In the Final CEQA document, the Lead Agency should require a phase-in schedule for these cleaner operating trucks to reduce project impacts. SCAQMD staff is available to discuss the availability of current and upcoming truck technologies and incentive programs with the Lead Agency and project applicant.

#### **Mitigation Measures for Operational Air Quality Impacts (Other)**

14. In addition to the mobile source mitigation measures identified above the Lead Agency should incorporate the following on-site area source mitigation measures below to reduce the project's regional air quality impacts from NOx emissions during operation. These mitigation measure should be incorporated pursuant to CEQA Guidelines §15126.4, §15369.5.

- Maximize use of solar energy including solar panels; installing the maximum possible number of solar energy arrays on the building roofs and/or on the Project site to generate solar energy for the facility.
- Use light colored paving and roofing materials.
- Utilize only Energy Star heating, cooling, and lighting devices, and appliances.
- Install light colored "cool" roofs and cool pavements.

- Limit the use of outdoor lighting to only that needed for safety and security purposes.
- Require use of electric or alternatively fueled sweepers with HEPA filters.
- Use of water-based or low VOC cleaning products.