South Coast
Air Quality Management District
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Draft Environmental Impact Report (Draft EIR) for the Proposed National Orange Show Industrial Project

The South Coast Air Quality Management District (AQMD) 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.

In the project description, the lead agency proposes the construction of four industrial buildings totaling approximately 752,710 square feet on a 38.1 acre site. Building sizes will range from 27,810 square feet to 616,000 square feet. The proposed project would include at least 632 daily heavy-heavy duty truck (HHDT) trips and the project description includes 141 trailer at dock doors. In the Air Quality Section, the lead agency quantified the project's construction and operation air quality impacts and has compared those impacts with the AQMD's recommended regional daily significance thresholds concluding that construction emission impacts would be significant for NOx and that operational emission impacts would be significant for NOx and VOC. The AQMD staff has concerns regarding the air quality analysis including the daily truck trip rate used in the CalEEMod modeling, the omission of a localized analysis for operational on-site emissions, non-standard methods used in the health risk assessment, and that additional mitigation measures should be considered by the lead agency in the Final EIR. Additional comments are included in the attachment.

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

Sincerely,

Ian MacMillan
Program Supervisor, Inter-Governmental Review
Planning, Rule Development & Area Sources

IM:GM
Attachment

SBC111209-06
Control Number

Health Risk Assessment (HRA)

Impacts from Emission Sources in HRA not Aggregated

1. Cancer risks from individual roadway segments are presented in Tables 9, 10, and 11 in the air quality appendix to the Draft EIR. However, it appears that the aggregated risk from all sources on each receptor has not been calculated. AQMD staff strongly recommends that the risk from all sources be presented for the sensitive receptors most impacted by the project. The current dispersion modeling approach selected (Cal3QHCR and SCREEN3) to evaluate cancer risks may not be amenable to this approach. The lead agency may want to consider using AERMOD instead so that all sources and receptors can be included in a single model run.

Emission Rates Used in Health Risk Assessment

2. It is unclear to AQMD staff how the emission rates used in the air quality HRA were derived. AQMD staff was not able to reproduce either the idling rates or the running emission rates using EMFAC 2007, the rates listed on the AQMD webpage derived from EMFAC2007, or EMFAC 2011. Idling emissions in particular appear to be significantly too low in the EIR with heavy duty truck rates of 0.011 grams/hour cited in Table C2 of Appendix B. Rates from EMFAC 2007 are over 100 times higher at 1.288 g/hr. In addition, emission rates typically increase with lower vehicle speed. As trucks will be traveling on roadways and onsite with different speeds, the emission rates for each roadway should reflect these increased rates. AQMD staff recommends that the lead agency update the emission factors and redo the HRA with the updated rates. The derivation of these emission rates should also be shown in greater detail.

Emission Rates Applied to Dispersion Model for the HRA

3. The air quality appendix to the Draft EIR does not contain enough information to determine how emission rates from offsite roadways and onsite idling and truck travel were applied to the dispersion model. Although the dispersion model outputs are provided, they only show a unitary rate of 1 gram per second. If unitary emission rates are used in dispersion modeling, the post-processing that adjusts concentrations based on calculated emission rates needs to be presented in the EIR. Because this information is not presented, AQMD staff cannot confirm the validity of the presented HRA results.

Onsite Running Emissions

4. Emissions from onsite truck travel were not explicitly modeled for the HRA. Instead, risks from two separate roadways with only 113 total truck trips were used to determine risks from this emission source. Because there will be substantially more than 113 truck trips per day at this facility, these risks are underestimated. The lead agency should explicitly model all onsite truck travel in the HRA.

Operations - Truck Trip Rates

5. In Table C1 in the Air Quality Appendix, the lead agency assumed a daily operational truck trip rate of 0.91 trips for the proposed 695,000 square foot warehouse land use, which is below the CalEEMod default trip rate of 2.59. The AQMD staff recommends that the lead agency revise the operational emissions and health effects estimates using the CalEEMod default trip rate value of 2.59 (with 40% trucks)[1] in the Final EIR. Using the recommended CalEEMod rate would result in an estimate of 720 daily truck trips compared to the lead agency's estimate of approximately 632 daily truck trips using the 0.91 trip rate. Using the Draft EIR's lower trip rate may potentially underestimate project operational emissions and health effects from on-road trucks. If the lead agency chooses to use the lower rate, then project conditions should be added to ensure that the project is limited to the specified throughput.

Operational Localized Significance Thresholds Analysis

6. In the Air Quality Section of the Draft EIR, the lead agency has limited its localized operational analysis to carbon monoxide impacts at intersections during operations. Since the proposed project operations could result in up to 720 daily heavy-heavy duty truck trips (see comment #1), with substantial NOx and PM emissions, localized on-site operational emission sources including the trucks entering, idling on-site, and exiting should be estimated along with any other on-site emission sources. These estimates should then be compared with the appropriate localized operational thresholds. Otherwise, the lead agency has not demonstrated that localized operational impacts are less than significant. It is noted that on page 3.3-5 and in an aerial map inspection that the proposed project and its truck route are located within one-quarter mile of sensitive receptors (Burbank Elementary School, Orchid Court Assisted Living Facility and residences) north of the proposed project. AQMD guidance for performing a localized air quality analysis can be found on the AQMD web page.[2] Should the lead agency conclude after its analyses that operational localized air quality impacts exceed the AQMD daily significance thresholds, staff has compiled mitigation measures in addition to those measures listed on page 3.3-28 of the Draft EIR that can be implemented if the air quality impacts are determined to be significant. [3]

Idling Times

7. The HRA analysis assumes on page 3.3-28 that each truck will idle only five minutes per day onsite. Due to the number of trucks that will use this facility, there is a reasonable possibility of at least some queuing from entering and exiting the project site each day. The AQMD staff therefore recommends that the HRA include up to 15 minutes of total idling onsite per truck (five minutes entering, five minutes exiting, and five minutes at the dock). In the Draft EIR, the lead agency has proposed Mitigation Measure AIR-1b that

[1] CalEEMod User Guide Appendix E3
[2] http://www.aqmd.gov/ceqa/handbook/LST/LST.html
[3] http://www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html

includes the provision prohibiting idling in excess of five minutes on-site. The lead agency should include clarification in the Final EIR about how it would enforce this measure (other than signage) to ensure that this additional idling will not occur. Otherwise, the lead agency should revise estimates of on-site idling and use up to 15 minutes per truck in the Subsequent Final EIR.

Operational Mitigation Measures

8. The lead agency has determined that air quality impacts from project operations will exceed recommended regional thresholds. In addition, the AQMD staff has observed that the lead agency has used non-standard methodologies in its health risk effects analysis, which may result in significant project health effects. Finally, due to the significant air quality impacts from the trucks serving this project, the AQMD staff recommends that the lead agency consider the following additional mitigation measures. Other lead agencies that have used these measures include the City of Banning[4]1, Riverside County[5], City of San Bernardino[6], and the San Pedro Bay Ports[7], among others.

- At project start, all heavy duty trucks entering the property must meet or exceed EPA 2007 engine emission standards.
- Beginning in 2015, all heavy duty trucks entering the property must meet or exceed 2010 engine emission standards.
- If the above clean truck requirements are infeasible, a phase-in schedule should be put forth that will feasibly achieve emission reductions as soon as possible.
- The facility operator will maintain a log of all trucks entering the facility to ensure that on average, the daily truck fleet meets that emission standards listed in the EIR. This log should be available for inspection by city staff at any time.
- The facility operator will ensure that site enforcement staff in charge of keeping the daily log and monitoring for excess idling will be trained/certified in diesel health effects and technologies [for example, by requiring attendance at CARB approved courses (such as the free, one-day Course #512)].
- Limit the daily number of trucks allowed at each facility to levels analyzed in the Final EIR.
- Require at least a portion of the fleet to utilize alternative fueled technologies.
- Create a buffer zone, which can be office space, employee parking, greenbelt, etc. between the warehouse and sensitive receptors.
- Prohibit all vehicles from idling in excess of five minutes, both on- and off-site.
- Have truck routes clearly marked with trailblazer signs, so trucks will not enter residential areas.

[4]Banning Business Park
http://banning.ca.us/archives/30/July%2013,%202010%20City%20Council%20Agenda.pdf
[5] Mira Loma Commerce Center
http://www.rctlma.org/online/content/conditions_of_approval.aspx?PERMITNO=pp17788
[6] Palm/Industrial Distribution Center http://www.ci.san-bernardino.ca.us/civica/filebank/blobdload.asp?BlobID=11793
[7] Clean Trucks Program http://www.cleanairactionplan.org/cleantrucks/

- At a minimum, require tenants upon occupancy that do not already operate 2007 and newer trucks to apply in good faith for funding to replace/retrofit their trucks, such as Carl Moyer, VIP, Prop 1B, or other similar funds. Should funds be awarded, the tenant should also be required to accept and use them.
- Require facility operator to become SmartWay Partner upon start of operations.
- Require facility operator to incorporate incentives and requirements such that the maximum feasible number of truck trips (e.g., 90%) will be carried by SmartWay 1.0 or greater carriers within the shortest timeframe possible (e.g., three years).

Off-Road Construction Equipment Emissions Analysis

9. In the air quality analysis, the lead agency estimated project short- and long-term air quality impacts using CalEEMod, a statewide land use emissions computer model. This model uses default and user-defined settings to estimate emissions based on the land use settings. The lead agency has estimated on-site, off-road equipment emissions calculated by the CalEEMod model. After these estimates using the CalEEMod model, the lead agency then reduced the modeling off-road equipment emissions by 33 percent citing documentation of e-mail exchanges in 2010 between the lead agency's consulting staff and the ARB staff found in Appendix A - Justification for OFFROAD Equipment Reductions. In these e-mail exchanges, the lead agency concluded that a 33 percent reduction for load factors would apply to off-road equipment emissions estimated using CalEEMod.

   It is the AQMD staff's understanding that CARB currently does not approve of reducing the default settings in the current OFFROAD2007 at a project level because the 33 percent reduction in statewide emissions of diesel exhaust is not necessarily reflected in individual pieces of equipment. In fact, for some equipment types, OFFROAD2007 may underestimate emissions while others may be overestimated. Because of these revisions, CARB is currently seeking approval of the new OFFROAD2011. The AQMD staff therefore recommends that the lead agency use existing OFFROAD2007 defaults until OFFROAD2011 is incorporated into CalEEMod later this year. Therefore, even though the reductions might not change the lead agency's determination of significance for construction air quality impacts, these reductions related to reduced off-road equipment load factors are not recommended by the AQMD staff without further substantial evidence to support those emission reductions resulting from their use. An analysis comparing OFFROAD2011 emission factors with those used in the project analysis may provide such an approach. Otherwise, the lead agency should commit to enforcing the assumed lower emission factors.

Construction Mitigation Measures

10. In the Air Quality Section, the lead agency has determined that construction air quality impacts will exceed the SCAQMD recommended daily significance thresholds for NOx. In addition to the measures listed on 3.3-25, the AQMD staff recommends the following change and additional mitigation measure to reduce short-term air quality impacts from NOx, if feasible:

Recommended Change:

MM AIR-1a

- Prohibit idling in excess of five minutes~~.~~, on- and off-site.

Recommended Addition:

- Reroute construction haul trucks away from congested streets or sensitive receptor areas.

11. Further, other lead agencies in the region including LA County Metro, the Port of Los Angeles, and the Port of Long Beach have also enacted the following mitigation measures. AQMD staff recommends the following measures to further reduce air quality impacts from construction equipment exhaust:

    - Project start to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
    - Post-January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

    A copy of each unit's certified tier specification, BACT documentation, and CARB or AQMD operating permit shall be provided at the time of mobilization of each applicable unit of equipment.

    For additional measures to reduce off-road construction equipment, refer to the mitigation measure tables located at the following website:
    www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html