



South Coast
Air Quality Management District
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August 5, 2015

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Los Angeles, CA 90012

Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS)
for the State Route 710 North Study

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the above-mentioned document. The following comments are intended to provide guidance to the lead agency and should be incorporated into the Final Environmental Impact Report/Statement (Final EIR/EIS) as appropriate.

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes transportation improvements to enhance mobility and relieve congestion. The study area for the SR-710 North Study is approximately 100 square miles and generally bounded by I-210 on the north, I-605 on the east, I-10 on the south, and I-5 and SR-2 on the west. The proposed alternatives for the project include the No Build Alternative, the Transportation System Management/Transportation Demand Management (TSM/TDM) Alternative, the Bus Rapid Transit (BRT) Alternative, the Light Rail Transit (LRT) Alternative, and the Freeway Tunnel Alternative. Components of the TSM/TDM Alternative will also be included with the BRT, LRT, and Freeway Tunnel Alternatives.

After reviewing the Draft EIR/EIS, SCAQMD staff is very concerned about the inadequate analysis of two key aspects of the CEQA document. First, the Health Risk Assessment (HRA) for the project shows that the tunnel alternatives will present a significant health risk to local residents when compared to a No Build scenario, however the Draft EIR/EIS concludes that this impact is less than significant, and no mitigation is required. Second, localized air quality impacts are not adequately analyzed, and decision-makers would not be able to use the EIR/EIS as written to determine if the project will adversely affect air quality in the local area. For example, there is no quantitative analysis of localized impacts for the freeway tunnel alternatives to determine if ambient air quality standards are exceeded for NO₂ or CO. For these reasons, the analysis should be revised, taking into consideration comments contained in this letter and additional detailed comments presented in the attachment.

Finally, the proposed air pollution control equipment for the freeway tunnel alternatives in the Draft EIR/EIS will require permits from SCAQMD. As a responsible agency, we request that

the project proponents meet with SCAQMD staff to discuss details of the permitting requirements so that they can be included in the Final EIR/EIS.

Staff is available to work with the lead agency to address these issues (including the detailed comments in the attachment) and any other air quality questions that may arise. Please contact me at (909) 396-3244, if you have any questions regarding these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Ian V. MacMillan".

Ian MacMillan
Planning and Rules Manager

Attachment
IM:JW:JC
LAC150306-02
Control Number

Attachment

Health Risk Assessment Demonstrates Significant Impact But Draft EIR/EIS Concludes Impacts Are Not Significant

1. SCAQMD staff appreciates that the lead agency chose to include a Health Risk Assessment (HRA) with this Draft EIR/EIS. Table 3-4 of this HRA shows the incremental cancer risk between project alternatives and the No Build alternative. This table shows that cancer risks could reach up to 149 chances per million at the maximum exposed residential receptor, which is above SCAQMD's recommended CEQA threshold of 10 chances per million for all freeway alternatives. Despite this conclusion, the Draft EIR/EIS determines that cancer risks are less than significant, based on an inappropriate consideration of the CEQA baseline.

The Draft EIR/EIS incorrectly uses a static 2012 year in comparison to project impacts. This approach is inappropriate because existing regulations (e.g., ARB's Truck and Bus Rule) will lower this health risk, even in the absence of this project. By using a static 2012 baseline, the Draft EIR/EIS is taking credit for other projects (e.g., ARB regulations) as a component of the build alternatives for the SR710. This approach is inconsistent with previous LA Metro projects. For example, LA Metro successfully defended a case in the California Supreme Court on this very issue, holding that use of a future baseline was proper in some cases (*Neighbors for Smart Rail v. Exposition Metro Line Construction* (2013) 57 Cal.4th 439). Because the No Build-Build Alternative comparison shows health risk impacts that are substantially above SCAQMD's recommended significance thresholds, SCAQMD staff recommends that the lead agency find that this impact is significant, and identify mitigation to reduce this impact to a less than significant level.

Localized Air Quality Impacts Not Analyzed

2. The proposed project is surrounded by sensitive land uses (i.e., residential dwellings north, south, east and west of the project site); however, the Draft EIR/EIS did not evaluate potential localized air quality impacts that could result from construction and operation of the proposed project. Without this analysis, the lead agency does not have information to make a determination of significance about potential air quality impacts from this project. This lack of analysis is especially concerning as the tunnel alternatives will focus all of the vehicle emissions along the entire tunnel to the portal and ventilation stack areas.

Therefore, SCAQMD staff recommends that the lead agency revise the air quality analysis to include an assessment of potential localized air quality impacts during construction and operation of the proposed project. This issue was raised in Technical Advisory Committee meetings and in a direct meeting between SCAQMD staff and LA Metro and Caltrans staff. This type of localized analysis is regularly conducted by other lead agencies for CEQA and was also conducted for the I-710 Corridor project Draft EIR/EIS just south of this project site.

These potential localized air quality impacts should be assessed using SCAQMD's Localized Significance Methodology and compared to the localized significance thresholds specific to

the project area¹. Furthermore, the lead agency should ensure that all future projects include a localized air quality analysis, if warranted. In the event that the lead agency determines the proposed project will result in significant localized construction and operational air quality impacts, the SCAQMD staff recommends that the lead agency require mitigation to minimize these impacts to a less than significant level.

SCAQMD is not Listed as a Responsible Agency

3. The Draft EIR/EIS does not discuss SCAQMD's role as a responsible agency for the tunnel alternatives for this project. These alternatives are proposing to install ventilation stacks with air pollution control devices that require permits from SCAQMD. It is our understanding from discussions at Technical Advisory Committee meetings that the lead agency would meet directly with SCAQMD staff to discuss SCAQMD's role regarding permitting requirements for this project. As a responsible agency, we will need to rely on the EIR/EIS for this project before any permits can be issued. We recommend that the lead agency schedule a meeting with us to discuss the detailed permitting requirements for this project.

Health Risk Assessment Methodology

4. The HRA conducted for this Draft EIR/EIS used an older methodology from the state Office of Environmental Health Hazard Assessment for calculating risks. This older methodology was replaced with a newer version in March 2015. This updated HRA guidance uses more recent scientific findings to evaluate children's greater susceptibility to cancer risks from exposure to air pollution. In general, residential cancer risks from pollutants like diesel particulate matter are found to increase between two and three times compared to the old methodology. The EIR should consider revising the calculated cancer risks using this updated guidance.

Air Quality Analysis Does Not Include All Areas Potentially Impacted by This Project or Cumulative Impacts from Other Projects

5. While the 710-North study area primarily covers northeast Los Angeles and western San Gabriel Valley, the lead agency did not analyze impacts from the tunnel alternatives in the surrounding areas. Completing the SR 710 would result in traffic and air quality impacts throughout wide portions of Los Angeles County. For example, the Draft EIR/EIS states that regardless of build alternatives, passenger vehicles will continue using arterial roads to transverse north and south through the region. This project includes alternatives which will allow trucks to now travel on the SR-710 between I-10 and I-210 and would introduce new truck trips in the area which did not exist without the project. In conjunction with Cumulative Projects such as the I-710 South Corridor Project and Port expansion projects, overall traffic and demand would increase along the I-710. SCAQMD staff recommends that the lead agency expand the study area and provide a more robust analysis of the potential cumulative air quality impacts in the surrounding areas from this project and other reasonably foreseeable projects.

¹ The Localized Significance Threshold (LST) methodology and Mass Rate LST Look Up Tables are available at: <http://www.aqmd.gov/ceqa/handbook/LST/LST.html>

Transportation Conformity

6. The quantitative transportation conformity analysis contained within the Draft EIR/EIS has not yet been approved or submitted to the Transportation Conformity Working Group (TCWG). The protocol for this project was only submitted July 22, 2015 to the TCWG, but it has not yet been approved. SCAQMD staff identified potential errors in the conformity analysis contained within the Draft EIR/EIS, as identified below. This comment does not preclude any comments we may provide to the TCWG on either the protocol or the conformity analysis.

The conformity analysis results as presented in Table 5.8 through 5.10 in the Air Quality Assessment Report only show a comparison between maximum concentrations for each scenario, without accounting for where the maximum impact occurs. The conformity analysis must instead demonstrate that there are no increased air quality impacts at any receptor, not just a comparison between the maximum receptors, which may be located miles apart from one another.

Dispersion Modeling

7. Some of the receptors were incorrectly placed within the volume source exclusion zone and their results would be invalid. Since there are modeled volume sources which extend beyond the Project boundary, care should be taken to ensure that no receptors are placed within the volume source exclusion zone. This can be done by using smaller, adjacent volume sources or by using an area source instead to model the freeway emissions.
8. Highway Interchanges were modeled with a 30 foot release height to capture over and under passes of the interchange. The lead agency should instead use an elevated volume release height to properly model emissions from trucks on an interchange.
9. AERMOD file SR710_RoadwaysOperation_DTA_5yrs_OTHER.DTA models the scrubber/ventilation system with a stack velocity ranging from 14.72 – 34 m/s and a flow rate of 565 – 1,312 m³/s. The Tunnel System Report describes the system as having an exiting stack velocity of 1,780 – 3,690 ft/min (9.04 – 18.75 m/s) and a flow rate ranging from 762,800 – 1,652,700 cfm (360 – 780 m³/s). The modeled scrubber/ventilation system stack velocities and flow rates are greater than the proposed values identified in the Tunnel System Report. A higher exit velocity and flow rate would tend to result in an underestimation of modeled concentrations. SCAQMD staff recommends the lead agency revise the modeling by using the actual exit velocity and flow rate in the report.

Emission Estimation

10. In the Health Risk Assessment (HRA), when comparing project impacts to a 2012 CEQA baseline, health risks were estimated using a long-term average emission rate based on a weighted average after calculating emissions each year. However, when comparing project impacts to the NEPA No Build baseline, long-term average emissions were linearly interpolated using values only for years 2012, 2020, 2025 and 2035. Because emission

estimates do not follow linear patterns over time, the estimation methodology may underestimate potential health risks. SCAQMD staff recommends using a consistent emission estimate methodology (i.e. analyze emissions every year, rather than just milestone years) for both the CEQA and NEPA baselines.

Scrubber/Ventilation System

Although the DEIR/EIS has scrubber/ventilation system design discussion in the Tunnel Systems Report, specifics are unclear and additional information is required.

11. The proposed air pollution control system does not control gaseous pollutants, and it is not as effective at reducing ultrafine particles as it is with coarser particulate matter. If pollution from the entire tunnel system will be vented through limited release points, then additional controls should be added that will also reduce gaseous pollutants and ultrafine particles. The EIR should review studies prepared for SCAQMD that evaluate different types of controls for roadway tunnel pollution, and implement any that are found feasible for this project.²
12. According to the *Development of Electrostatic Precipitator [ESP] for Road Tunnel*³ the type of electrodes (wire or spike plate type) used is a factor for the proper operation of the ESP. A spike plate type electrode provides an optimum electrode configuration with stable and uniform corona discharge. As a result, spike plate electrodes have greater performance, reliability and stability. The Tunnel Systems Report for the Freeway Tunnel Alternative does not discuss or analyze electrode type. SCAQMD staff recommends evaluating and considering both plate styles.
13. The operation of an ESP would generate ground-level ozone (O₃) which adversely affects human health. Since ozone generation is directly related to ESP power consumption, increased ESP power consumption would create higher ozone emissions. SCAQMD staff recommends additional discussion and details on minimizing ozone generated in the ESP⁴.
14. With high flow rates indicated in the Tunnel Systems Report for the Freeway Tunnel Alternative, the efficiency is expected to only be as low as approximately 80%. The flow through the ESP should be slow and evenly distributed for adequate particle collection (2-8 ft/sec). Normally gas velocity is reduced by expansion in the inlet plenum.
15. To prevent re-entrainment of the particles, the aspect ratio (length to height of ESP) should be greater than 1. SCAQMD staff recommends maintaining an aspect ratio greater than 1 during the ESP design stages.
16. Additionally, there may be a need to remove the large particles (chunks of rubber, etc.) to prevent clogging the ESP. SCAQMD staff recommends analyzing particle size distribution found in tunnels. The lead agency should discuss the impacts of large particles on the ESP.

²Near-Road Mitigation Measures and Technologies studies and webcast found here:

<http://www.aqmd.gov/home/library/technology-research/technology-forums>

³ Miyake, A (2006) Development of Electrostatic Precipitator for Road Tunnel [PDF]

<http://www.isesp.org/ICESP%20X%20PAPERS/PDFS/Paper%2010B1%20030%20Miyake.pdf>

⁴ Ibid

17. The Tunnel Systems Report indicates that a waste water treatment system will be required to maintain the air cleaning equipment. The lead agency does not discuss the materials collection and discharge process. Furthermore, the lead agency should provide additional discussion and design specifications of the waste water treatment system and cleaning process.
18. Since moisture can lower the efficiency of the ESP as well as the resistivity and affect the operation, the lead agency should address measures to remove high moisture from the inlet gas stream.
19. The lead agency should discuss and evaluate the potential reduction of NO₂ with dry adsorbent that has been used in tunnels with ESP in Japan (Delivery Truck Record).⁵
20. While the Tunnel Systems Report addresses the fire and safety features procedures for the tunnel, it does not explore the potential for explosions due to build-up carbon or carbon monoxide in the ESP (Electrostatic Precipitators).⁶ The lead agency should discuss equipment maintenance and equipment breakdown procedures and the risk of upset events. Additionally, the lead agency should evaluate the need for back-up power, redundant systems and any associated equipment.

Modification of Construction Mitigation Measures

21. Section 4.2.3 of the CEQA Evaluation III(b) states that short-term degradation of air quality may occur during construction activities and Measures AQ-1 through AQ-5 would reduce construction emissions to less than significant levels. Table 3.13.4 of the Draft EIR/EIS and Tables 5.1-5.5 of the Air Quality Analysis also indicate that construction emissions exceed the daily maximum construction emission thresholds. While SCAQMD staff appreciates the Green Construction Policy that LA Metro has committed to using for this project, the Draft EIR/EIS did not provide any supporting documentation or emissions calculations to support claims that Measures AQ-1 through AQ-5 would reduce construction emissions to less than significant levels. SCAQMD staff recommends updating the Air Quality Analysis to demonstrate that the mitigation measures are adequate to reduce impacts to a less than significant level. In addition, the mitigation measures proposed for this project should be modified to include the underlined comments in numbers 22-25 below.
22. Measure AQ-1 – Fugitive Dust (applies to all four Build Alternatives)
During clearing, grading, earthmoving, or excavation operations, the Resident Engineer will require the construction contractor to control excessive fugitive dust emissions by regular watering or other dust preventive measures using the following procedures, as specified in the South Coast Air Quality Management District Rule 403. The Construction Contractor will be required to:

⁵ Delivery Truck Record. Retrieved July 22, 2015.

<http://panasonic.net/ecosolutions/air/tunnel/records.html>

⁶ Buekens, A (Pollution Control Technologies – Vol. I – Electrostatic Precipitators

<http://www.eolss.net/sample-chapters/c09/e4-14-01-08.pdf>

- Prevent dust from being visible in the atmosphere beyond the property line of the emission source
 - Prevent dust emissions from exceeding 20 percent opacity
 - Prevent track-out from extending 25 feet or more in cumulative length from the point of origin from an active operation
 - Utilize best available control measures included in Table 1, 2, & 3 of SCAQMD Rule 403
 - Submit Large Operations Notification (Form 403N)
 - Comply with all Large Operations requirements
23. Measure AQ-2 – Equipment and Vehicle Emissions (applies to all four Build Alternatives)
 During all site preparation, grading, excavation, and construction, either the Resident Engineer for the TSM/TDM, BRT, and LRT Alternatives or the Resident Engineer for the Freeway Tunnel Alternative, as applicable, will require the Construction Contractor to:
- Require the use of 2010 and newer diesel haul trucks (e.g., material delivery trucks and soil import/export) and if the lead agency determines that 2010 model year or newer diesel trucks cannot be obtained, the lead agency shall use trucks that meet EPA 2007 model year NOx emissions requirements.
24. Measure AQ-4 – California Department of Transportation (Caltrans) Standard Specification for Construction (applies to ~~Freeway Tunnel Alternative~~ all Build Alternatives)
25. Measure AQ-5 – Metro Green Construction Policy (applies to ~~TSM/TDM, BRT, and LRT Alternatives~~ all Build Alternatives)