

**Method and Assumptions requiring Review and Concurrence by TCWG:**

The Geographic Area covered by the analysis:

The proposed project is located in the High Desert area of Los Angeles and San Bernardino Counties and extends for a distance of approximately 63 miles between SR-14 in the City of Palmdale and SR-18 in the Town of Apple Valley. In Los Angeles County, the High Desert Corridor (HDC) roughly follows the Avenue P-8 corridor. In San Bernardino County, the HDC runs slightly south of El Mirage Road and then follows Air Expressway Road near I-15. East of I-15, the proposed route curves south until it ends at SR-18 in the Town of Apple Valley at Bear Valley Road. The hot-spot conformity analysis will be prepared for the portion of the proposed HDC in San Bernardino County, from the county line to SR-18. The portion of the proposed HDC in Los Angeles County is in an area that is in nonattainment only for ozone.

General Approach and Analysis years for emissions and air quality modeling:

The hot-spot analysis will evaluate the build scenarios first to see if a new or worsened PM<sub>10</sub> NAAQS violation is predicted. There are currently 8 Alternatives as follow, including a No-Build Alternative: TSM/TDM; Freeway/Expressway; Freeway/Toll way; Avenue P-8 Corridor, SR-138 and SR-18 Improvements; Freeway/Expressway with ROW for potential High Speed Rail (HSR) facility; Freeway/Toll way with ROW for potential HSR facility; and a Hybrid of the alternatives.

The hot-spot analysis will follow the December 2010 EPA Guidance for Quantitative Analyses. The following analysis years will be evaluated for the existing, opening, and horizon years: 2010, 2020, and 2040.

Construction at each individual site is not anticipated to last more than 5 years; and therefore, the construction emissions will not be included in this hot-spot analysis because they are considered temporary as defined in 40 CFR 93.123(c)(5).

Emissions and Air Quality Models and Methods to be used:

EMFAC2007 will be used in burden mode for emissions inventory; and AERMOD will be used for dispersion due to necessity for modeling of freeways and nearby sources. Future developments of EMFAC will be considered and incorporated only when required by EPA for conformity purposes for this project.

Applicable PM NAAQS to be evaluated:

The Mojave Desert Air Basin within San Bernardino County is currently in nonattainment of the 24-hour PM<sub>10</sub> NAAQS; so the applicable NAAQS for the purpose of this hot-spot analysis is 150 µg/m<sup>3</sup> for the 24-hour PM<sub>10</sub>. There are no applicable annual PM<sub>10</sub> NAAQS.

Type of PM emissions to be modeled for project sources:

Direct exhaust emissions of PM<sub>10</sub> (EMFAC2007); Brake and Tire wear PM<sub>10</sub> (EMFAC2007); and re-entrained PM<sub>10</sub> paved road dust (using the January 2011 AP-42).

Nearby Sources:

A number of nearby sources have been identified based on the State Facility Inventory Database (see attached map and spreadsheet). Among those identified are large cement and aggregate plants. Only nearby PM<sub>10</sub> sources within approximately 2 miles of the proposed alignments will be considered in the modeling.

HSR alternatives only propose to preserve ROW with no engineering plans to open any stations or to implement the actual HSR; therefore, no emissions will be considered attributed by the HSR components.

Receptor Locations:

Receptors near sensitive zones will be sited just outside the proposed project ROW (< 5 meters) with finer spacing of 10 meters in a grid format out to 50 meters from the ROW; and with wider spacing of 50 meters in a grid format out to 150 meters.

Receptors in the rural or commercial/non-sensitive zones will be sited just outside the proposed project ROW with wider spacing of 50 meters in a grid format out to 150 meters from the proposed ROW.

Meteorological and Background Data:

Victorville monitoring station is maintained by the MDAQMD, located at 14306 Park Avenue in the City of Victorville, approximately 0.2 miles west of I-15 and 0.25 miles north of SR-18. The Avenue P-8 Corridor Alternative roughly follows the existing SR-18 alignment to the junction with I-15, located approximately 0.25 miles from the Victorville station. The Freeway/Expressway/Toll Alternatives of the HDC are located approximately 4 miles north of the Victorville station. As the Victorville station is located in close proximity to freeway (I-15) and highway (SR-18) facilities with a similar level of use anticipated in the HDC; it may be considered as site-specific and the hot-spot analysis will be prepared with the meteorological and monitoring data at the Victorville station upon concurrence.

No preprocessed AERMOD-ready meteorological data are readily available from the MDAQMD or ARB that utilize the most current surface or upper air data. A preprocessed AERMOD-ready data set has been identified from dispersion modeling done for a nearby power plant. However, the preprocessed data set was created to represent the Victorville station with the surface data from 2002 through 2004 and upper air data from the Mercury-Desert Rock Airport in Mercury, NV. Upon concurrence by TCWG, the hot-spot analysis will be prepared using this preprocessed AERMOD-ready data.

The Victorville station is located close to the I-15 (PM 40.509) with a daily total volume of approximately 87,000; and to SR-18 (PM 96.571) with a daily total volume of approximately 43,500 based on the Caltrans 2009 count data. The Victorville station is located in a commercial area and is similar to portions of the proposed alignments of the HDC within the urban area. It should be noted that large portions of the proposed HDC alignments are located in a rural and desert area. Upon concurrence, the hot-spot analysis will be prepared based on the background PM<sub>10</sub> concentrations at the Victorville station.

Project-specific data to be used:

A traffic analysis is being prepared and operational analyses will be performed. Traffic data for the new mainlines will become available this summer. Although there are 8 Alternatives for the proposed project, the traffic analysis, for the purpose of forecast modeling, will evaluate 4 scenarios only – No-Build, and various toll and freeway/expressway options.

Schedule for conducting the analysis and points of consultation:

The analysis will be performed as the project specific traffic data become available (this summer per project schedule) and the hot-spot analysis may be submitted for review and concurrence by TCWG in the late 2011 or early 2012.