

Foreword to the CO or PM_{2.5} “Hot-Spot” Analysis Considerations for Project Sponsors document

Please note - Since the following document was approved by the Inter Agency Consultation Group in 2013, there has been a change in the air quality classifications for both the fine particulate (PM_{2.5}) and carbon monoxide (CO) standards in the St. Louis region. These changes, in turn, affect whether a project sponsor has to determine if a project level PM_{2.5} or CO “hot-spot” analysis is needed as part of a project-level conformity determination. The changes are discussed below.

PM_{2.5}

In 2018 EPA redesignated Franklin, Jefferson, St. Charles and St. Louis counties and the City of St. Louis in Missouri to attainment of the 1997 annual PM_{2.5} standard (effective October 2, 2018). In 2019 EPA redesignated Madison, Monroe and St. Clair Counties and Ballwin Township in Randolph County, Illinois to attainment for this standard (effective May 28, 2019). Based on EPA’s 2016 Fine Particulate Matter National Ambient Air Quality Standards: State Implementation Plan Requirements: Final Rule, when an area is redesignated to attainment for the 1997 standard, the 1997 standard is revoked and conformity requirements no longer apply. These areas are identified as “maintenance (standard revoked)”. Project-level PM_{2.5} air quality Conformity Determination for the 1997 annual PM_{2.5} standard is not required.

For both the 2006 and 2012 annual PM_{2.5} standards EPA has classified the St. Louis region (Missouri-Illinois) as in attainment. Project-level PM_{2.5} air quality Conformity Determination for these standards are not required.

In the future, if the U.S. Environmental Protection Agency (EPA) were to strengthen the annual PM_{2.5} standard and if any of the counties in the St. Louis region were to be designated as nonattainment, then the PM_{2.5}-related considerations described in the following document could be of interest to a project sponsor.

CO

As of March 29, 2019, the end of the 20-year maintenance period for the CO maintenance area, consisting of the City of St. Louis and that portion of St. Louis County within I-270 in Missouri, was reached. The area is considered attainment.

A project-level CO air quality Conformity Determination for this standard is no longer required.

CO or PM_{2.5} “Hot-Spot” Analysis Considerations for Project Sponsors

Initial considerations for determining if a “Hot Spot” analysis is needed:

- Determine whether or not the project is actually located within a CO or PM_{2.5} nonattainment or maintenance area based upon the project's geographical location.
- Classify projects as exempt or non-exempt or regionally significant for purposes of conformity to screen projects that are exempt from conformity requirements (regardless of geographic location).
- Establish project level benchmarks based upon EWG’s long-range transportation plan/TIP regional conformity determination (and the project's current design concept and scope). The project level benchmark, for CO, is the standard 35 ppm for the 1-hour and 9 ppm for the 8-hour average concentration. The project level benchmark, for PM_{2.5}, is the standard 12 micrograms per cubic centimeter. The project level air quality benchmark should be documented in the project file to be carried forward into the preliminary design phase. Exempt projects and projects located in attainment areas require no further assessment actions.

PM_{2.5}

For a project in the PM_{2.5} area, is the project of “local air quality concern” listed in 40 CFR 93.123(b)(1)?

A PM hot-spot analysis must be based on quantitative analysis methods for the following types of projects:

- New highway projects that have a significant number of diesel vehicles, and expanded highway projects that have a significant increase in the number of diesel vehicles;
- Projects affecting intersections that are at Level-of-Service D, E, or F with a significant number of diesel vehicles, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes from a significant number of diesel vehicles related to the project;
- New bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location;
- Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location;
- Projects in or affecting locations, areas, or categories of sites which are identified in the SIP or SIP submission as sites of violation or possible violation.

Questions that should be considered in consultation on particular projects:

1. What is the annual average daily traffic (AADT) of the affected roadways? If greater than 125,000 total AADT and at least 10,000 of that AADT is diesel truck traffic consult with IACG.

2. What is the percentage and AADT of diesel truck traffic of the affected roadways? If diesel truck traffic constitutes greater than 10% of total AADT or at least 10,000 trucks consult with IACG.
3. What is the level of service of the affected facility? If LOS is D, E or F, consult with IACG.
4. Does the project involve new bus and rail terminals and transfer points that have a significant number of diesel vehicles congregating at a single location or expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location? If yes, consult with IACG.

If the IACG determines that the project requires a project level hot spot analysis, consult EPA's Quantitative PM Hot-Spot Modeling Guidance for performing the analysis.

CO

For a project in the CO non-attainment or maintenance area, is a quantitative hot-spot analysis required under 40 CFR 93.123(a)(1)?

Questions that should be considered in consultation on particular projects:

1. Is the project in or affecting locations, areas, or categories of sites which are identified in the SIP as sites of violation or possible violation?
2. Does the project affect intersections that are at Level-of-Service D, E, or F, or those that will change to Level-of-Service D, E, or F because of increased traffic volumes related to the project?
3. Does the project affect one or more of the top three intersections in the nonattainment or maintenance area with highest traffic volumes, as identified in the applicable SIP? If yes, consult IACG.
4. Does the project affect one or more of the top three intersections in the nonattainment or maintenance area with the worst level of service, as identified in the applicable SIP? If yes, consult IACG.

If no, a qualitative CO hot-spot analysis is required (under 40 CFR 93.123(a)(2)).¹

If yes, consult EPA's MOVES Project-level CO Modeling Guidance and other applicable guidance for performing the analysis.

Streamlining Considerations for Projects that Require a Hot-spot Analysis

DOT, in consultation with EPA, may also choose to make a categorical hot-spot finding that 40 CFR 93.116(a) is met without further hot-spot analysis for any project described in paragraphs 40 CFR 93.123(a) and (b)(1). When a project is determined to require a hot-spot analysis, the IACG will determine whether any such finding has been made by the DOT HQ offices, and whether such a finding applies to a particular project.

¹A quantitative CO hot-spot analysis can also be done to satisfy this requirement for applicable projects.

Attachment A: Exempt Projects 40 CFR 93.126.

Safety

Railroad/highway crossing

Projects that correct, improve, or eliminate a hazardous location or feature

Safer non-Federal-aid system roads

Shoulder improvements

Increasing sight distance

Highway Safety Improvement Program implementation

Traffic control devices and operating assistance other than signalization projects

Railroad/highway crossing warning devices

Guardrails, median barriers, crash cushions

Pavement resurfacing and/or rehabilitation

Pavement marking

Emergency relief (23 U.S.C. 125)

Fencing

Skid treatments

Safety roadside rest areas

Adding medians

Truck climbing lanes outside the urbanized area

Lighting improvements

Widening narrow pavements or reconstructing bridges (no additional travel lanes)

Emergency truck pullovers

Mass Transit

Operating assistance to transit agencies

Purchase of support vehicles

Rehabilitation of transit vehicles ¹.

Purchase of office, shop, and operating equipment for existing facilities

Purchase of operating equipment for vehicles (e.g., radios, fare boxes, lifts, etc.)

Construction or renovation of power, signal, and communications systems

Construction of small passenger shelters and information kiosks

Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures)

Rehabilitation or reconstruction of track structures, track, and trackbed in existing rights-of-way

Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet ¹

Construction of new bus or rail storage/maintenance facilities categorically excluded in 23 CFR part 771

Air Quality

Continuation of ride-sharing and van-pooling promotion activities at current levels

Bicycle and pedestrian facilities

Other

Specific activities which do not involve or lead directly to construction, such as:

Planning and technical studies

Grants for training and research programs

Planning activities conducted pursuant to titles 23 and 49 U.S.C.

Federal-aid systems revisions

Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action

Noise attenuation

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Emergency or hardship advance land acquisitions (23 CFR 710.503)

Acquisition of scenic easements

Plantings, landscaping, etc.

Sign removal

Directional and informational signs

Transportation enhancement activities (except rehabilitation and operation of historic transportation buildings, structures, or facilities)

Repair of damage caused by natural disasters, civil unrest, or terrorist acts, except projects involving substantial functional, locational or capacity changes

Notes

¹In PM2.5 nonattainment or maintenance areas, such projects are exempt only if they are in compliance with control measures in the applicable SIP.