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COMMISSION**

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Memorandum

TO: Partnership Programming and Delivery Working Group
Partnership Local Streets and Roads Working Group

DATE: March 8, 2012

FR: Brenda Dix and Stefanie Hom

W. I.

RE: 2013 TIP Development - Air Quality Conformity Process

With the development of the 2013 Transportation Improvement Program (TIP), MTC is requesting that all project sponsors complete the Air Quality Module in the Fund Management System (FMS) by **March 31, 2012** to ensure that projects clear this process in advance of requiring funding approval from Caltrans. In addition, beginning December 2012, the PM_{2.5} hot spot analysis process will transition from a qualitative analytical method to a quantitative analytical method. At that time project sponsors that are required to complete a PM_{2.5} hot spot analysis will be subject to the new quantitative analysis requirements, which is more rigorous than the current qualitative process. MTC is advising all project sponsors to complete the air quality consultation process before the quantitative requirement goes into effect.

Background

The nine-county San Francisco Bay Area region was designated by the U.S. Environmental Protection Agency (EPA) as a non-attainment area for the national 24-hour fine particulate matter (PM_{2.5}) standards in December 2009. Due to this designation, certain transportation projects that involve significant levels of diesel vehicle traffic are required to undergo a project-level PM_{2.5} conformity determination process.

The air quality consultation process is completed through the Air Quality Module in FMS and through the Air Quality Conformity Task Force (AQCTF) interagency consultation process. MTC schedules AQCTF meetings on the 4th Thursday of every month. The Air Quality Module in FMS is the sponsor's first step towards meeting the air quality conformity requirements.

Step 1: Project Identification

To begin the project level conformity process, the project sponsor must complete a series of six questions in the Air Quality Module of FMS. These questions can be accessed by logging into FMS, going to the Air Quality module for the project in question, and clicking on the button that reads "Edit Project Conformity". The project sponsor must then answer the following six questions:

1. Does this project have any federal funding?
2. Does this project (or any phases of the project) require any federal action (such as federal authorization or approval for funding or environmental review) after December 14, 2010?

3. Is the project exempt from both regional and project-level air quality conformity under 40 CFR 93.126?

A pop-up window containing [Attachment A](#) can be opened for exemption selection.

4. Is the project exempt from regional air quality conformity under 40 CFR 93.127? Note that a project exempt from regional air quality conformity may still be required to undergo a PM_{2.5} hot-spot analysis and project-level conformity determination.

A pop-up window containing [Attachment B](#) can be opened for exemption selection.

5. Is the project exempt from regional air quality conformity under 40 CFR 93.128?

A pop-up window containing [Attachment C](#) can be opened for exemption selection.

6. Does this project meet the definition of a “project of air quality concern” under 40 CFR 93.123(b)(1)? Note that the interagency consultation via the Air Quality Conformity Task will be needed to make the final determination.

A pop-up window containing [Attachment D](#) can be opened for POAQC definition.

Once the sponsor completes these six questions, they must certify that the answers are complete and that no further changes are needed. The Project Conformity Analysis Summary will then be updated and will indicate to the sponsor whether their project is a) not subject to the project level conformity process, b) is exempt and will be sent to the task force for concurrence, or c) the project sponsor must advance to step 2 of the project level conformity process. This information will also be sent in an email to the project sponsor contact listed in FMS.

Step 2: Interagency Consultation

Projects that must undergo interagency consultation include those that use Federal funds, require Federal approval, or are not automatically exempt from PM_{2.5} hot-spot analysis requirements.

Project sponsors are required to download and complete the Project Assessment Form for PM_{2.5} Interagency Consultation in its entirety ([Attachment E](#)). The purpose of this form is for the project sponsor to provide sufficient information to allow the AQCTF to determine if a project is considered a POAQC and if the project requires undergoing a project-level PM_{2.5} hot-spot analysis.

Once the form is completed, the project sponsor must upload it to FMS. This will trigger the project to be agendaized for the next AQCTF meeting. The project sponsor will be asked to present an overview of the project and a summary of the Project Assessment Form at that meeting. The AQCTF, which includes representatives from FHWA, FTA, Caltrans, EPA and MTC, will then determine if a project meets the definition of a project of air quality concern and if the project requires undergoing a project-level PM_{2.5} hot-spot analysis. If so, the sponsor must complete step 3 of the Air Quality Conformity process. If the project is determined not to be a POAQC, then the sponsor has completed the project level air quality process and will receive email documentation from MTC.

Step 3: Review of PM_{2.5} Hot-Spot Analysis

A PM_{2.5} hot-spot analysis estimates likely future localized PM_{2.5} pollutant concentrations and compares those concentrations to the national ambient air quality standards (NAAQS) and/or no-build conditions. Such an analysis is a means of demonstrating that a transportation project meets Clean Air Act conformity requirements to support state and local air quality goals with respect to potential localized air quality impacts.

In December 2010, the EPA released new guidance to be used by state and local agencies to conduct quantitative PM_{2.5} hot-spot analyses in non-attainment areas or maintenance areas for new highway and transit projects that involve significant diesel emissions. This new guidance transitions the PM_{2.5} hot-spot analysis from a qualitative analytical method to a quantitative analytical method. Beginning December 20, 2012, project sponsors will be required to complete a quantitative PM_{2.5} hot-spot analysis which requires extensive data collection and modeling efforts. Until then, PM_{2.5} hot-spot analyses can continue to be done qualitatively; quantitative analyses are optional.

A quantitative analytical method will become necessary due to the complex nature of PM emissions, the statistical form of each NAAQS, and temperature variability over the course of a year. The new quantitative PM hot-spot analyses will need to be based on latest planning assumptions to estimate likely future localized pollutant concentrations in comparison to the relevant PM_{2.5} and PM₁₀ national ambient air quality standards (NAAQS) or no-build conditions. Project emissions, including emissions from vehicles, road dust, and construction, can be calculated using the most recent EMFAC emissions model, and the AERMOD and CAL3QNCR air quality models.

A PM hot-spot analysis compares air quality concentrations with the project (build scenario) to either the NAAQS or to air quality concentrations without the project (no-build scenario). A transportation project will meet conformity requirements if at each appropriate receptor:

- PM concentration of the build scenario is equal to or less than the NAAQS; or
- PM concentration of the build scenario is equal to or less than the PM concentration of the no-build scenario.

When the sponsor completes this analysis they will upload their hot spot analysis to FMS and will be agendaized for the next AQCTF meeting. The AQCTF will review the methods, assumptions, and analysis of the PM_{2.5} hot-spot analysis. The EPA and either FHWA or FTA must concur with the recommendations from the AQCTF. Upon completion of the interagency consultation, project sponsors must seek approval from FHWA or FTA on the PM_{2.5} hot-spot analysis. If it is determined that the project will not lead to future air quality violations, then the project is approved to move forward. If the project will lead to future violations, then mitigation measures must be put in place to minimize impacts.

Attachment A

PROJECTS EXEMPT FROM CONFORMITY DETERMINATION AS PER 40 CFR 93.126

Below is a list of projects exempt from conformity determination as per 40 CFR 93.126.

Safety

- Railroad/highway crossing
- Hazard elimination program
- Safer non-federal-aid system roads
- Shoulder improvements
- Increasing sight distance
- Safety improvement program
- Traffic control devices and operating assistance other than signal projects
- Railroad/highway crossing warning devices
- Guardrails, median barriers, crash cushions
- Pavement resurfacing or rehabilitation
- Pavement marking demonstration
- 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
- Purchase of office, shop, and operating equipment for existing facilities
- Purchase of operating equipment for vehicles (e.g. radios, fareboxes, 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 busses and rail cars to replace existing vehicles or for minor expansions of the fleet
- 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
- Emergency or hardship advance land acquisitions (23 CFR Part 712.204(d))
- 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.

Attachment B

PROJECTS EXEMPT FROM REGIONAL EMISSIONS ANALYSES AS PER 40 CFR 93.127

Below is a list of projects exempt from regional conformity determination as per 40 CFR 93.126. However, certain projects may still require project-level conformity determination.

- Intersection channelization projects.
- Intersection signalization projects at individual intersections.
- Interchange reconfiguration projects.
- Changes in vertical and horizontal alignment.
- Truck size and weight inspection stations.
- Bus terminals and transfer points.

Attachment C

PROJECTS EXEMPT FROM REGIONAL EMISSIONS ANALYSES AS PER 40 CFR 93.128

Below is a list of projects exempt from regional conformity determination as per 40 CFR 93.128. However, certain projects may still require project-level conformity determination.

- Traffic signal synchronization projects.

Attachment D

PROJECTS OF AIR QUALITY CONCERN AS PER 40 CFR 93.123(B)(1)

Below is a list of projects that fall under the definition of a “Project of Air Quality Concern” as per 40 CFR 93.123(b)(1).

- New or expanded highway projects that have a significant number of or significant increase in 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; and
- Projects in or affecting locations, areas, or categories of sites which are identified in the PM_{2.5} or PM₁₀ applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

Attachment E
Project Assessment Form for PM_{2.5} Interagency Consultation

The San Francisco Bay Area is designated as nonattainment for the 24-hour PM_{2.5} standard. Beginning December 14, 2010, certain projects are required to engage in interagency consultation and complete PM_{2.5} hot-spot analysis as part of the project-level conformity determination process.

The purpose of this form is for the project sponsor to provide sufficient information to allow the Air Quality Conformity Task Force to determine if a project is considered a project of air quality concern and therefore requires a project-level PM_{2.5} hot-spot analysis pursuant to Federal Conformity Regulations.

A project of air quality concern is defined in 40 CFR 93.123(b)(1) as follows:

- (i). New or expanded highway projects that have a significant number of or significant increase in diesel vehicles;
- (ii). 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;
- (iii). New bus and rail terminals and transfer points than have a significant number of diesel vehicles congregating at a single location;
- (iv). Expanded bus and rail terminals and transfer points that significantly increase the number of diesel vehicles congregating at a single location; and
- (v). Projects in or affecting locations, areas, or categories of sites which are identified in the PM₁₀ or PM_{2.5} applicable implementation plan or implementation plan submission, as appropriate, as sites of violation or possible violation.

The form is not required under the following circumstances:

The project does not require a project-level PM hot spot analysis since it:

- Is exempt pursuant to 40 CFR 93.126; or
- Is a traffic signal synchronization project under 40 CFR 93.128; or
- Uses no Federal funds AND requires no Federal approval from FHWA or FTA after December 14, 2010.

Instructions

The project sponsor is responsible for taking the following actions:

1. **Fill out this form in its entirety** and ensure that there is a sufficient level of detail about the project for the Air Quality Conformity Task Force to make an informed decision on whether or not a project requires a project-level PM_{2.5} hot-spot analysis. For road projects, make sure to include all of the following pieces of information in the project area: level-of-service, annual average daily truck volume, truck counts, truck percentages. For transit projects, make sure to include all of the following pieces of information: current level of service for the transit routes, proposed changes to level of service for transit routes, number of diesel bus vehicles along the route and congregating, number of overall transit vehicles, ridership.
2. Project sponsors are required to supplement the assessment form with the attachments listed below within the limited qualities listed. Both the Task Force and project sponsors have found that these materials help to better explain the project and its potential impacts.
 - 1-2 maps or graphics which illustrate the project site and the surrounding land uses;
 - 1-2 tables or charts which details information about the ADT and truck volumes
 - Links to the draft environmental document and/or traffic studies
 - A prepared summary of how criteria for a project of air quality concern (defined in 40 CFR 93.123(b)(1)) does or does not apply to the project. See Example 1: Application of Criteria for a Project of Air Quality Concern. This is only intended as a one page summary with emphasis on the third section of the example.

3. Upload and submit this completed form to MTC via FMS so that MTC can schedule this project for interagency consultation by the Air Quality Conformity Task Force. In addition to this form, the project sponsor may upload the PM_{2.5} hot-spot analysis via FMS for review by the Conformity Task Force.
4. Ensure a representative is available to discuss the project at the Air Quality Conformity Task Force meeting if necessary.

Example 1: Application of Criteria for a Project of Air Quality Concern

Project Title: US 101 Interchange Replacement/Improvement

Project Summary for Air Quality Conformity Task Force Meeting: (Insert Date)

Description

- Project will replace the interchange at US 101 and XYZ street in ABC city.
- No change to US 101 mainline
- Existing unconventional interchange has 19 legs
- Proposed interchange improves connections to/from US 101 and nearby roadways, and between the nearby shopping district west of US 101 and the hotels, restaurants, and other businesses east of US 101
- New southbound ramp configuration will improve weave/merge on southbound US 101
- Standardized interchange configuration will improve traffic flow and vehicle speeds at nearby intersections

Background

- NEPA process for Initial Study/Environmental Assessment (IS/EA) almost complete
- Public review for IS/EA ends (insert date)
- No comments received on air quality thus far
- Seeking air quality conformity determination on or before (Insert Date)
- Schedule based on deadline for STIP funding allocation

Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))

(i) *New or expanded highway projects with significant number/increase in diesel vehicles?*

- Not a new or expanded highway project
- Interchange replacement—no additional lanes on US 101
- No change in traffic volume or truck percentages on US 101
-

(ii) *Affects intersections at LOS D, E, or F with a significant number of diesel vehicles?*

- Diesel vehicles represent 2% of intersection traffic volume
- Intersections at LOS D, E, or F improve, and delays decrease (2035)
- No project changes to land use that would affect diesel traffic percentage
-

(iii) *New bus and rail terminals and transfer points?—Not Applicable*

(iv) *Expanded bus and rail terminals and transfer points?—Not Applicable*

(v) *Affects areas identified in PM₁₀ or PM_{2.5} implementation plan as site of violation?*

- No state implementation plan for PM_{2.5} (due by December 2012)
- Therefore, not identified in plan as an area of potential violation
- Nearest PM₁₀ or PM_{2.5} violations in 2007 in Redwood City, 10 miles southeast

RTIP ID# (<i>required</i>)				
TIP ID# (<i>required</i>)				
Air Quality Conformity Task Force Consideration Date				
Project Description (<i>clearly describe project</i>)				
Type of Project:				
County	<i>Narrative Location/Route & Postmiles</i>			
	Caltrans Projects – EA#			
Lead Agency:				
<i>Contact Person</i>	<i>Phone#</i>	<i>Fax#</i>	<i>Email</i>	
Federal Action for which Project-Level PM Conformity is Needed (<i>check appropriate box</i>)				
<i>Categorical Exclusion (NEPA)</i>	EA or Draft EIS	FONSI or Final EIS	PS&E or Construction	<i>Other</i>
Scheduled Date of Federal Action:				
NEPA Delegation – Project Type (<i>check appropriate box</i>)				
<i>Exempt</i>	Section 6004 – Categorical Exemption	Section 6005 – Non-Categorical Exemption		
Current Programming Dates (<i>as appropriate</i>)				
	PE/Environmental	ENG	ROW	CON
<i>Start</i>				
<i>End</i>				

Project Purpose and Need (Summary): *(please be brief)*

Surrounding Land Use/Traffic Generators *(especially effect on diesel traffic)*

Brief summary of assumptions and methodology used for conducting analysis

Opening Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

RTP Horizon Year / Design Year: If facility is a highway or street, Build and No Build LOS, AADT, % and # trucks, truck AADT of proposed facility

Opening Year: If facility is an interchange(s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

RTP Horizon Year / Design Year: If facility is an interchange (s) or intersection(s), Build and No Build cross-street AADT, % and # trucks, truck AADT

Opening Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

RTP Horizon Year / Design Year: If facility is a bus, rail or intermodal facility/terminal/transfer point, # of bus arrivals for Build and No Build, % and # of bus arrivals will be diesel buses

Describe potential traffic redistribution effects of congestion relief (*impact on other facilities*)

Comments/Explanation/Details (please be brief)