Purpose:
Establish procedure for determining what type of air quality elements and level of analysis are required for transportation projects.

Summary:
This SOP will identify the various elements of an air quality section that may be required in either an environmental report or an environmental document. It will also provide a list of triggers regarding what to incorporate in the various air quality elements. Finally, it provides a discussion of the requirements for various quantitative analyses.

Personnel:
District environmental staff or other project sponsor, ENV staff, and FHWA.
Appendices:
Appendix A: Acronyms
Appendix B: Projects Exempt from Conformity Under 40 CFR 93.126
Appendix C: Nonattainment Areas in Texas

Detailed Procedures:
1. **Air Quality Elements.** The following are the standard elements that are to be addressed and the order that they are to be addressed in the air quality section of an environmental document or environmental report. Please reference the current Air Quality Guidelines for more detailed information on each of these elements.
   a. Conformity
   b. CO TAQA
   c. Hot-Spot Analysis (currently only applies to parts of El Paso)
   d. CMP/CMS
   e. MSAT Analysis

2. **Triggers for Air Quality Subsections.** The following table identifies the triggers that affect when and how each of the air quality elements listed above are to be included in environmental documents.

<table>
<thead>
<tr>
<th>AQ Element</th>
<th>Criteria</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Conformity</strong></td>
<td>The project is in an attainment or unclassifiable area OR is exempt under 40 CFR 93.126 (Appendix B).</td>
<td>Conformity rules do not apply. Please reference the appropriate conformity template language in the Air Quality Environmental SOU.</td>
</tr>
<tr>
<td></td>
<td>The project is in a nonattainment or maintenance area (Appendix C) AND is not exempt under 40 CFR 93.126.</td>
<td>Conformity rules do apply. Please reference the appropriate conformity template language in the Air Quality Environmental SOU.</td>
</tr>
<tr>
<td><strong>CO TAQA</strong></td>
<td>The project is exempt under 40 CFR 93.126 OR is not adding capacity OR has a design year AADT &lt; 140,000.</td>
<td>CO TAQA is not required. Please reference the appropriate CO TAQA template language in the Air Quality Environmental SOU.</td>
</tr>
<tr>
<td></td>
<td>The project is not exempt under 40 CFR 93.126 AND is adding capacity AND has a design year AADT &gt; 140,000 vpd.</td>
<td>CO TAQA is required. See item 3a below.</td>
</tr>
<tr>
<td><strong>Hot Spot Analysis</strong> (Currently ONLY applies in a portion of El Paso)</td>
<td>The project is not in a CO/PM nonattainment/maintenance area OR is exempt under 40</td>
<td>The Hot Spot Analysis element does not apply and is not required.</td>
</tr>
<tr>
<td>District)</td>
<td>CFR 93.126 OR has no FHWA/FTA involvement.</td>
<td>The project is in a CO nonattainment/maintenance area <strong>AND</strong> is not exempt under 40 CFR 93.126 <strong>AND</strong> has FHWA/FTA involvement.</td>
</tr>
<tr>
<td>---</td>
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<tr>
<td></td>
<td></td>
<td>The project is in a PM nonattainment/maintenance area <strong>AND</strong> is not exempt under 40 CFR 93.126 <strong>AND</strong> has FHWA/FTA involvement <strong>AND</strong> a decision is expected prior to December 2012.</td>
</tr>
<tr>
<td>CMP/CMS</td>
<td>The project is in an attainment or unclassifiable area <strong>OR</strong> is not adding capacity <strong>OR</strong> is not in a TMA <strong>OR</strong> has no FHWA/FTA involvement.</td>
<td>The project is a nonattainment or maintenance area <strong>AND</strong> is adding capacity <strong>AND</strong> is in a TMA <strong>AND</strong> has FHWA/FTA involvement.</td>
</tr>
<tr>
<td>MSAT Analysis</td>
<td>The project is exempt under 40 CFR 93.126 <strong>OR</strong> is not adding</td>
<td>The project is exempt from a MSAT analysis. Please</td>
</tr>
</tbody>
</table>
The project is not exempt under 40 CFR 93.126 AND is adding capacity AND has a design year AADT < 140,000 vpd AND will not be affecting a major intermodal freight facility AND has FHWA/FTA involvement.

A qualitative MSAT analysis is required. Please reference the appropriate template language in the Air Quality Environmental SOU.

Note: Although only required for projects with FHWA/FTA involvement, ENV highly encourages project sponsors to complete a qualitative MSAT analysis for risk management.

The project is not exempt under 40 CFR 93.126 AND is adding capacity AND has a design year AADT > 140,000 vpd AND has FHWA/FTA involvement.

A quantitative MSAT analysis may be required. A conference call with FHWA, MPO, ENV, District, and Contractor is required to determine if a quantitative analysis is required and to establish parameters for the required analysis. See item 3c below.

Note: Although only required for projects with FHWA/FTA involvement, ENV highly encourages project sponsors to complete a qualitative MSAT analysis for risk management since a qualitative analysis discloses information that is unavailable and incomplete.

### 3. Quantitative Analyses:

a. **CO TAQA.** The purpose of this analysis is to determine if the CO impact of proposed transportation projects will adversely affect local air quality such that CO levels will exceed the 1-hour or 8-hour CO standards.

   i. If this analysis is required, please refer to the discussion of this analysis in TxDOT’s current Air Quality Guidelines.

   ii. A CO emissions table will be provided by ENV upon request, which may prevent the need for performing MOBILE6.2/MOVES emissions modeling.

   iii. If the project involves changes to a signalized intersection, then the CAL3QHC dispersion model will need to be used as well as EPA’s

iv. If the project decision occurs post December 2012, then EPA’s MOVES emission model will be required for project level analyses rather than the current MOBILE6.2 emission model.

v. If the project is in a CO nonattainment or maintenance area (currently only applies to El Paso), then it would need a determination by the Consultation Partners (see item 4 below) as to whether the project is of “air quality concern” as defined in 40 CFR 93.123(a). A CO hotspot analysis can be incorporated into the CO TAQA; however, the TAQA will need to be at least as stringent as the requirements for hotspot analysis as determined by the Consultation Partners. After December 2012, this will also require following EPA’s December 2010 guidance, Using MOVES in Project-Level Carbon Monoxide Analyses.

vi. Please reference the Air Quality Environmental SOU for a description of what needs to be included when submitting the CO TAQA.

b. Quantitative PM Hot Spot Analysis. This section is currently only applicable to the City of El Paso. The purpose of this analysis is to determine if the PM impact of proposed transportation projects will adversely affect local air quality such that PM levels worsen existing conditions or will exceed the applicable PM NAAQS.

i. The Consultation Partners (see item 4 below) must make a determination as to whether the project is of “air quality concern” as defined in 40 CFR 93.123(b). If the project is of “air quality concern” then a PM hot spot analysis will be required.

ii. Due to the rollout of EPA’s new MOVES emission model, a quantitative PM hot spot analysis will only be required after December of 2012. If a decision is expected prior to this date, a qualitative PM hot spot analysis will be required.

iii. A quantitative hot spot analysis must address and include any requirements of the Consultation Partners and must be developed in accordance with the December 2010 EPA guidance titled Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas.

iv. The format for a quantitative hot spot analysis will be determined by the Consultation Partners on a project specific basis.

c. Quantitative MSAT Analysis. The purpose of this analysis is to provide a relative emissions analysis to compare emission trends for the build and no build alternatives to base year emissions.

i. If this analysis is required, please refer to the discussion of this analysis in TxDOT’s current Air Quality Guidelines, FHWA’s 2009 Interim Guidance Update on Mobile Source Air Toxic Analysis in NEPA Documents, and FHWA Resource Center’s 2006 document, A Methodology for Evaluating Mobile Source Air Toxic Emissions Among Transportation Project Alternatives.
ii. If a project has a higher potential for MSAT effects, then a quantitative MSAT assessment may be required and a conference call is required before proceeding. The participants of the conference call should include personnel from: the TxDOT district in which the project will be located, the project sponsor (if different than the District), ENV, FHWA, contractor, and responsible MPO. MPO personnel are included in order to obtain region specific data necessary to conduct the MSAT assessment. Minutes should be prepared by the project sponsor or their contractor following the conference call and distributed to all participants. The project file shall include the details (e.g. emission runs and data inputs) of the quantitative MSAT analysis. The information addressed during the conference call should include, but not be limited to, the following:

1. Years to be analyzed (base, interim, design year)
2. Affected network (typically the links that change in volume +/- 5%)
3. Required model and modeling parameters
4. Demographic information
5. Projected traffic volumes (AADT)
6. Project termini
7. Determination that the project is consistent with the appropriate transportation plans (e.g. MTP, RTP, TIP, STIP)
8. Traffic data and source of data
9. Available and applicable monitoring data
10. Any other pertinent MSAT or project-related information.

iii. A quantitative MSAT analysis must use the methodology and parameters established in the conference call.

iv. Please reference the Air Quality Environmental SOU for a description of what needs to be included when submitting the quantitative MSAT analysis.

4. Consultation Partners.
   a. Background:
      i. A consultation process is required for conformity determinations as specified under the federal conformity rule 40 CFR 93.105. Texas has developed an interagency consultation process under the state transportation conformity rule 30 TAC 114.260. Under these rules, the Consultation Partners have the responsibility for assisting FHWA/FTA in making conformity determinations on transportation plans and projects in CO or PM nonattainment/maintenance areas.
      ii. All federally funded or regionally significant projects in nonattainment/maintenance areas have to show project level conformity. In most cases, this is accomplished by showing that the project is included in and consistent with a currently conforming MTP and TIP, or STIP (as previously found to be conforming by the Consultation Partners). In CO and PM nonattainment areas (currently only applies to El Paso), the federal conformity rule also requires an
evaluation of whether the project will contribute to a CO/PM hot spot or worsen existing conditions, which is why the Consultation Partners must assist FHWA in making a project level conformity determination on these projects.

iii. The consultation partners include but are not limited to the local MPO, TxDOT district, ENV, TCEQ, FHWA, and EPA.

b. The Consultation Partners should be contacted early in the project-level planning process because their determination is part of the project-level conformity process and requires public involvement, which can be combined with NEPA public involvement if initiated early.

c. If the project is located in a CO/PM nonattainment or maintenance area and is not otherwise exempt from conformity, the District or project sponsor would need to work with its respective MPO in setting up a meeting of the local consultation partners. Additional resources regarding the consultation partners and the conformity process can be obtained at the following website: www.texastwg.org.

5. Environmental Reviews. If any of the quantitative analyses described in item 3 above is required for a project, ENV highly encourages the project sponsor to coordinate and submit quantitative analyses for approval prior to environmental review document submission. Although these may be few in number (typically < 25 projects per year); this may reduce risk of project delay.
Appendix A

Acronyms

AADT – Average Annual Daily Traffic
AQ – Air Quality
CFR – Code of Federal Regulations
CMP – Congestion Management Process
CMS – Congestion Management System
CO – Carbon Monoxide
ENV – TxDOT’s Environmental Affairs Division
EPA – Environmental Protection Agency
FHWA – Federal Highway Administration
MPA – Metropolitan Planning Area
MPO – Metropolitan Planning Organization
MSAT – Mobile Source Air Toxics
MTP – Metropolitan Transportation Plan
NAAQS – National Ambient Air Quality Standards
PM – Particulate Matter
SFP – Satisfactory for Further Progress
SIP – State Implementation Plan
SOP – Standard Operating Procedures
SOU – Standards of Uniformity
STIP – Statewide Transportation Improvement Program
TAC – Texas Administrative Code
TAQA – Traffic Air Quality Analysis
TCEQ – Texas Commission on Environmental Quality
TIP – Transportation Improvement Program
TMA – Transportation Management Area
TxDOT – Texas Department of Transportation
Appendix B

Projects Exempt from Conformity Under 40 CFR 93.126

Safety
1. Railroad/highway crossing.
2. Hazard elimination program.
4. Shoulder improvements.
5. Increasing sight distance.
6. Safety improvement program.
7. Traffic control devices and operating assistance other than signalization projects.
8. Railroad/highway crossing warning devices.
10. Pavement resurfacing and/or rehabilitation.
11. Pavement marking demonstration.
13. Fencing.
14. Skid treatments.
15. Safety roadside rest areas.
17. Truck climbing lanes outside the urbanized area.
18. Lighting improvements.
19. Widening narrow pavements or reconstructing bridges (no additional travel lanes).
20. Emergency truck pullovers.

Mass Transit
1. Operating assistance to transit agencies.
2. Purchase of support vehicles.
4. Purchase of office, shop, and operating equipment for existing facilities.
5. Purchase of operating equipment for vehicles (e.g., radios, fareboxes, lifts, etc.).
6. Construction or renovation of power, signal, and communications systems.
7. Construction of small passenger shelters and information kiosks.
8. Reconstruction or renovation of transit buildings and structures (e.g., rail or bus buildings, storage and maintenance facilities, stations, terminals, and ancillary structures).
9. Rehabilitation or reconstruction of track structures, track, and track bed in existing rights-of-way.
10. Purchase of new buses and rail cars to replace existing vehicles or for minor expansions of the fleet 1.

Air Quality
1. Continuation of ride-sharing and van-pooling promotion activities at current levels.
2. Bicycle and pedestrian facilities.

Other
1. Specific activities which do not involve or lead directly to construction, such as:
2. Planning and technical studies.
3. Grants for training and research programs.
4. Planning activities conducted pursuant to titles 23 and 49 U.S.C.
5. Federal-aid systems revisions.
6. Engineering to assess social, economic, and environmental effects of the proposed action or alternatives to that action.
7. Noise attenuation.
Appendix C

Nonattainment Areas in Texas

This document is now located at: http://crossroads/org/env/Guidance/AQ/default.htm and on the external website at http://www.txdot.gov/txdot_library/consultants_contractors/publications/environmental_resources.htm under the links titled Texas Nonattainment Areas and Counties and Nonattainment and Maintenance Designations and TIP/STIP/MTP Conformity Dates, respectively.