

Executive Summary

Milestones

On June 3, 2005, the Federal Highway Administration certified that the Houston-Galveston area's *2025 Metropolitan Transportation Plan (MTP) Update* and the *2006-2008 Transportation Improvement Program (TIP)* conformed with the requirements of the State Implementation Plan for the Houston-Galveston ozone nonattainment area. The June 3, 2005 conformity finding was established with the *Revisions to the State Implementation Plan for the Control of Ozone Air Pollution, Houston/Galveston/Brazoria Ozone Nonattainment Area (SIP)* (hereafter referred to as the "Mid-Course Review SIP"). This SIP had an Attainment Demonstration and a Rate of Progress portion to which it was conformed using their respective budgets.

Currently, an updated TIP and RTP have been submitted which need to conform to the budgets established in the "Mid-Course Review SIP" since a new SIP has not been approved. Then, this conformity determination for the *2035 Regional Transportation Plan (RTP)* and the *2008-2011 Transportation Improvement Program* used only the Attainment Demonstration Mid-Course Review SIP Motor Vehicle Emission Budgets (MVEB)s to demonstrate conformity since the Rate of Progress budgets have not been updated for the year 2008. The Mid-Course Review SIP established the 2007 Attainment Demonstration budgets for on-road mobile emissions at 186.13 tons per day of nitrogen oxides (NO_x) and 89.99 tpd for volatile organic compounds (VOC). The EPA found the Attainment Demonstration Mid-Course Review SIP Motor Vehicle Emission Budgets (MVEB)s adequate, effective May 9, 2005.

The new TIP will be approved in June by the Transportation Policy Council (TPC), and will be approved by Federal Highways (FHWA) in August. The new RTP with its conformity will be approved in August by TPC and adopted by FHWA at a later date.

Conformity Requirements

The Clean Air Act Amendments of 1990 (CAAA) require transportation plans, programs, and projects in nonattainment areas, which are funded or approved by the Federal Highway Administration (FHWA) or Federal Transit Administration (FTA), to conform to the SIP. This ensures that transportation plans, programs, and projects do not produce new air quality violations, worsen existing violations, or delay timely attainment of the National Ambient Air Quality Standards (NAAQS).

Additional requirements that apply include:

- Use of the latest planning assumptions
- Analysis based on the latest emission estimation model available
- Interagency consultation, as well as a public involvement process, must be

- conducted during the analysis (found in Sections 7 and 8, respectively)
- Timely implementation of Transportation Control Measures (TCMs)
 - An RTP and TIP that are consistent with the MVEBs established in the applicable SIP
 - Include all regionally significant projects expected in the nonattainment area in the RTP and TIP

Regional Inventory

H-GAC conducts regional emission analyses of transportation plans and transportation improvement programs to ensure that transportation activities are consistent with the air quality goals identified in the Mid-Course Review SIP. This conformity analysis of the Houston-Galveston-Brazoria nonattainment area accounts for emissions resulting from the nonattainment area’s transportation plans, including all regionally significant projects and the effects of emission control programs.

Motor Vehicle Emission Budgets

The budgets established in the Mid-Course Review SIP are as follows:

TABLE 1: Mid-Course Review Motor Vehicle Emission Budgets

Attainment Demonstration		
Budget (tpd)		
Year	NOx	VOC
2007	186.13	89.99

Source: Mid-Course Review SIP, TCEQ

These MVEBs represent the maximum allowable amount of emissions that may be produced by on-road sources as a result of the implementation of the RTP and TIP. These budgets are developed based on the emission inventories and photochemical modeling conducted for the development of the Mid-Course Review SIP and include emission reduction benefits from federal and state control programs.

Conformity Tests

As specified by the Code of Federal Regulations (40 CFR §93.109[c], as amended by 62 FR 43807, Aug. 15, 1997) all ozone nonattainment areas designated moderate and

above must pass a motor vehicle emissions budget test, if an adequate or approved SIP budget exists. The Houston-Galveston-Brazoria area has been designated as “Moderate” for the eight-hour standard with an attainment year of 2009, and as allowed in Phase 1 of the eight-hour ozone rule, if an adequate one-hour Attainment Demonstration budget is in place, that budget can be used for purposes of conformity as an alternate emissions test for the eight-hour attainment year. Due to this, the budget test must be satisfied using the Mid-Course Review MVEBs. This test is satisfied when emissions of the ozone pollutant’s precursors (VOC and NO_x) for each analysis year are less than or equal to the MVEBs established in the SIP. For the Attainment Demonstration test, the regional emission analysis may be performed for any years within the timeframe of the transportation plan, provided they are not more than ten years apart, and include the budget year (2007), the attainment year (2009) and the plan horizon year (2035). To meet this requirement analysis, years 2007, 2009, 2019, 2025 and 2035 were selected.

Modeling

Two modeling suites were used in this process. The Travel Demand Modeling at H-GAC uses the EMME/2 model with a special post-mode choice speed model. On the emissions side, the TTI suite of emissions software is used in conjunction with the latest version of EPA’s MOBILE6 model to replicate the on-road modeling performed in the SIP. The data used in this conformity analysis is consistent with what was used in the SIP, except where more recent planning assumptions have been developed.

Conformity Analysis Results

The results of this conformity determination show that the *2035 Regional Transportation Plan* and the *2008-2011 Transportation Improvement Program* for the Houston-Galveston-Brazoria Transportation Management Area meet the requirements of the SIP for the Houston-Galveston ozone nonattainment area, as submitted December 17, 2004, according to the Clean Air Act (42 U.S.C. 7504, 7506 (c) and (d)), as amended on November 15, 1990, and the final conformity rule (40 CFR Parts 51 and 93).

TABLE 2: Conformity Analysis Summary

Analysis Year	VOC Emissions (tons/day)	VOC Budget (tons/day)	NOx Emissions (tons/day)	NOx Budget (tons/day)
2007	88.09	89.99	171.35	186.13
2009	80.70	89.99	150.86	186.13
2019	45.99	89.99	49.59	186.13
2025	42.14	89.99	39.25	186.13
2035	48.14	89.99	40.27	186.13

FIGURE 1: VOC Emissions Summary

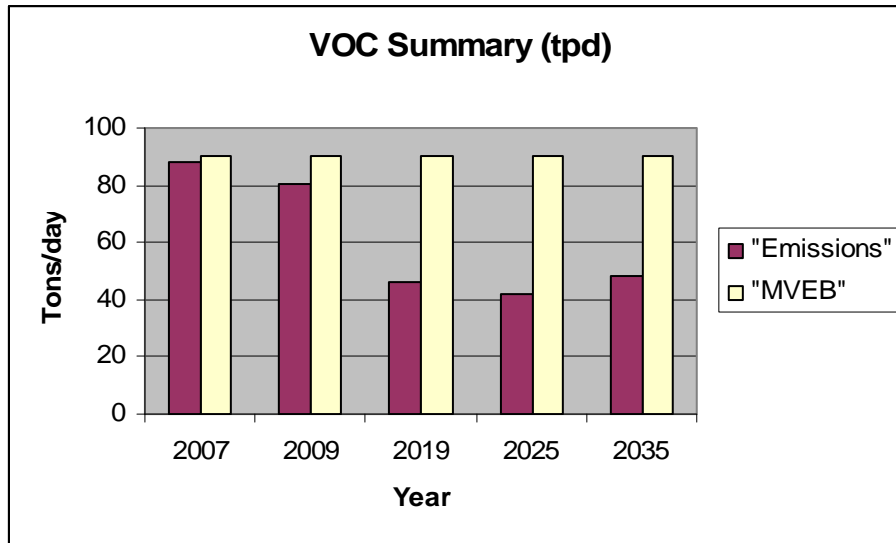
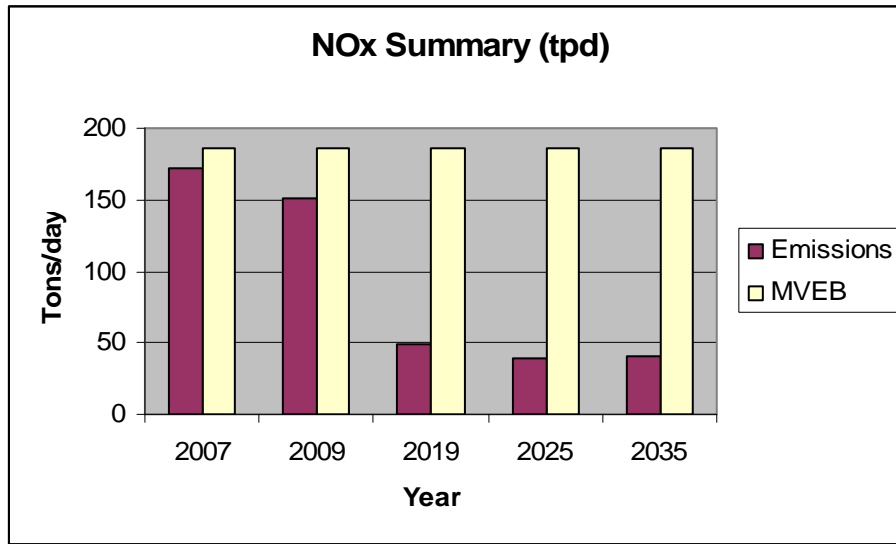


FIGURE 2: NOx Emissions Summary



Background Information on Conformity

More information on what conformity is and the regulations that apply to it can be found at: <http://www.fhwa.dot.gov/environment/conform.htm>.

This conformity determination involved a pre-analysis review discussion with the review agencies (Section 7) and a public comment period (Section 8).

