Addendum to the Technical Memorandum "U.S. 287 at Lamar: Air Quality" dated June 7, 2003.

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Introduction

This addendum memorandum updates the Technical Memorandum "U.S. 287 at Lamar: Air Quality" dated June 7, 2003 with new data. The data presented in this addendum memorandum updates the analysis and conclusions of the original air quality analysis.

Updated Existing Conditions

The following text reflects the updated existing conditions data made available since the original Technical Memorandum publication.

Current Conditions

The sources of air pollution in the region around Lamar include agricultural processes, gravel pits, power plants, and natural gas pipeline compression stations. Fugitive dust from agricultural operation dominates the PM_{10} emissions in the region because of the region's semiarid climate. Motor vehicle exhaust currently contributes approximately 0.4 percent (56 tons/day) of the total PM_{10} emissions (12,700 tons/day) in the Lamar area.

The Lamar area has not violated the National Ambient Air Quality Standard (NAAQS) for PM_{10} (particulate matter less than 10 microns in size, this is what causes a "brown cloud" of poor air quality) since 1992. The Colorado Air Quality Control Commission adopted redesignation plans for the Lamar PM_{10} non-attainment area in November 2001. As such the area is designated attainment, but subject to a maintenance plan to ensure that the air PM_{10} concentrations will remain in compliance with the standards. Table 1 shows monitoring data from the past few years in Lamar.

TABLE 1
Ambient PM_{10} Concentration Levels Measured from 2004 to 2006

		Maximum Concentration			
Monitoring Location	**Parameter**	**2004**	**2005**	**2006**	**NAAQS**
100 N. 2nd Ave	24-Hour Average ($\mu g/m^3$)	80	116	136	**150**
104 E. Parmenter St.	24-Hour Average ($\mu g/m^3$)	93	108	116	**150**

Source: U.S. EPA. 2007. *AirData Website*. http://www.epa.gov/air/data/reports.html, report generated June 29, 2007.

Updated Impacts

No Action Alternative

The No Action Alternative will not adversely affect air quality.

Proposed Action

PM_{10} Impacts

Clean Air Act (CAA) section 176(c)(1)(B) is the statutory criterion that must be met by all projects in nonattainment and maintenance areas that are subject to transportation conformity. Section 176(c)(1)(B) states that federally-supported transportation projects must not "cause or contribute to any new violation of any standard in any area; increase the frequency or severity of any existing violation of any standard in any area; or delay timely attainment of any standard or any required interim emission reductions or other milestones in any area." To meet statutory requirements, the March 10, 2006 final rule requires projects in areas that are nonattainment or maintenance for $PM_{2.5}$ and/or PM_{10} to conduct a conformity analysis if determined to be a project of air quality concern. Since the Proposed Action is in an area currently designated as maintenance for PM_{10}, a project level PM_{10} conformity analysis is required.

The U.S. Environmental Protection Agency (EPA) specified in 40 CFR 93.123(b)(1) of the final rule that projects of air quality concern are certain highway and transit projects that involve significant levels of diesel vehicle traffic, or any other project that is identified in the $PM_{2.5}$ or PM_{10} State Implementation Plan (SIP) as a localized air quality concern. Based on traffic model results presented in the traffic technical memorandum (Summary of Data Collection, Travel Demand Forecasting Model Development, and Traffic Results for the US 287 at Lamar Project, CH2M HILL 2003), the Proposed Action would not cause an increase in the percentage of diesel vehicles. A comparison of total vehicle miles traveled (VMT) and diesel VMT is shown in Table 2, which shows that the Proposed Action will not result in an increase in the percentage of VMT for diesel-fueled vehicles as compared to the No Action Alternative. Therefore, the Proposed Action is not a project of air quality concern; therefore a qualitative analysis is not required.

TABLE 2
Vehicle Miles Traveled

Scenario	Total VMT	Diesel VMT	Percent Diesel VMT
Existing 2002	69,939	11,890	17%
No Action 2025	82,568	14,037	17%
Build 2025	83,745	14,237	17%

Source: CH2M HILL, "Summary of Data Collection, Travel Demand Forecasting Model Development, and Traffic Results for the U.S. 287 at Lamar Project." May 8, 2003.

During construction, it is anticipated that the project will cause a temporary increase in emissions from diesel-fueled construction equipment as well as dust from earth-moving activities, including emissions of $PM_{2.5}$ and PM_{10}. The Colorado SIP does not identify construction-related fugitive PM_{10} as a contributor to the particulate problem, therefore the fugitive PM_{10} emissions associated with highway project construction are not required to be

considered in the regional emission analysis. Construction activities may create fugitive dust emissions on a temporary basis, but are typically minimized by common best management practices.

Mobile Source Air Toxics Impacts

Mobile source air toxics (MSATs) are a subset of 188 air toxics defined in the CAA which are emitted from on-road vehicles and off-road vehicles and equipment. Some toxics are present in the fuel and are emitted either when fuel evaporates or as a result of incomplete combustion of the fuel. Other MSATs are formed during the combustion process, are present as an impurity in the fuel or occur as a result of engine wear.

EPA identified six priority MSATs, for which the Federal Highway Administration (FHWA) recently released guidance to assist in the analysis of impacts to air quality from release of these six MSATs resulting from a proposed transportation project. The FHWA guidance was used to analyze effects to air quality from MSATs for this project (FHWA, 2006).

Because the estimated VMT under the Proposed Action is nearly the same as the No Action Alternative, varying by less than two percent (see Table 2), it is expected there would be no appreciable difference in overall MSAT emissions in 2025 as a result of the Proposed Action. For both alternatives, emissions are virtually certain to be lower than present levels in the design year as a result of EPA's national control programs that are projected to reduce MSAT emissions by 57 to 87 percent from 2000 to 2020. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great (even after accounting for VMT growth) that MSAT emissions in the study area are likely to be lower in the future than they are today.

Conformity Statement

Because the project is not anticipated to create any new violations nor increase the frequency of an existing violation of the PM_{10} standard, it is determined to conform with the purpose of the current SIP and the requirements of the CAA. The proposed project is included in the regional transportation plan (RTP), Southeast Transportation Planning Southeast Region 2030 Transportation Plan. The RTP meets the conformity requirements identified by federal and state regulations for PM_{10}.

Mitigation of Proposed Action

Avoidance and Minimization. The Proposed Action is not anticipated to cause significant impacts to air quality, therefore no mitigation is proposed. However there is the potential for temporary impacts during construction, therefore best management practices will be implemented, as needed, to minimize the affects to air quality. These include watering exposed soils (roads and stockpiles) during dry periods, covering truck loads, limiting stockpile heights and limiting travel speed on unpaved areas.

During operation, the Proposed Action provides free flow of traffic at all major interchange movements, a design element that minimizes exhaust emissions associated with idling vehicle engines.

Conclusion

The data presented above updates the analysis and conclusions in the June 7, 2003 Technical Memorandum. Impacts and mitigation measures as detailed in the Environmental Assessment have been updated to reflect these changes.

References

FHWA. 2006. *Interim Guidance on Air Toxic Analysis in NEPA Documents*.

U.S. EPA. 2007. *AirData Website*. http://www.epa.gov/air/data/reports.html, report generated June 29, 2007.