



## 5.9 Air Quality Impacts

### 5.9.1 Introduction

Since the publication of the DEIS, the following changes have been made to this section:

- The comparative analysis of the alternatives for ozone impacts in Marion County was updated to reflect the elimination of the Mann Road variation such that Alternatives 2C, 3B, 3C, 4C, and 5B remain in the SR 37 corridor to I-465.
- The status of the transportation air quality conformity evaluations has been reported for Preferred Alternative 3C in the air quality “maintenance areas” of Marion County (within the Indianapolis metropolitan area) and Vanderburgh County (within the Evansville metropolitan area).
- A brief explanation of the use of MOBILE 5 versus MOBILE 6 is provided for motor vehicle emissions estimates in transportation conformity analyses prior to the expiration of the two-year grace period on January 29, 2004.
- The effect on transportation conformity analyses is described for the final USEPA designation of counties as non-attainment for the 8-hour ozone standard.
- A brief explanation is provided on the differences in the air quality analysis conducted for the DEIS and the final conformity evaluation by the Indianapolis MPO with reference to a detailed memorandum on the topic in Appendix K, *Air Quality Analysis*.
- A paragraph has been added to address air quality analyses to be conducted in Tier 2.
- A brief explanation has been added concerning FHWA policy on timing of air quality conformity findings in relation to NEPA process completion.

There are two objectives to the air quality analysis for the Tier 1 EIS. First, in accordance with NEPA, the air quality analysis provides information on the mobile source emissions associated with each alternative. Second, in accordance with Section 176(c) of the Clean Air Act, the air quality analysis will be used to demonstrate that the selected alternative is in conformity with applicable air quality plans.

The air quality analysis methodology developed for this FEIS was worked out among the Indiana Department of Environmental Management (IDEM), INDOT, FHWA, Federal Transit Administration (FTA), and the Evansville and Indianapolis Metropolitan Planning Organizations (MPOs) in a May 2002 meeting. The agreed-upon methodology was aimed at (1) generating comparative emissions data associated with the alternatives and (2) identifying any alternatives that might have a high likelihood of placing the air quality conformity status of either Vanderburgh or Marion County in jeopardy. Since the publication of the DEIS, changes have been made to several of the alternatives, affecting their impacts, costs and benefits as described in Section 5.1.3. In particular, as a result of the elimination of the Mann Road variation, the comparative analysis has been revised for Alternatives 2C, 3B, 3C, 4C, and 5B because these alternatives now remain in the SR 37 corridor to just south of I-465.

Per Section 176(c) of the Clean Air Act, final conformity of Preferred Alternative 3C with the applicable mobile source emissions budgets in the State Implementation Plan (SIP) was documented for Marion County by the Indianapolis MPO in their Air Quality Conformity Analysis Report dated June 30, 2003. On December 4, 2003, the



Evansville MPO updated its Long-Range Transportation Plan (LRP) to reflect the latest assumptions concerning I-69 and other major transportation investments. An air quality analysis was performed by FHWA and INDOT on June 30, 2003, for Preferred Alternative 3C traffic added to the current Evansville LRP to demonstrate that the SIP budgets would not be exceeded.

## 5.9.2 Focus of Analysis

For a Tier 1 EIS, the focus is on a broad analysis of issues appropriate to selecting a corridor for a major transportation investment. Air quality impacts are both regional (i.e., meso-scale concerns) and local (i.e., micro-scale concerns) in scope. The Tier 1 EIS focuses on regional concerns. More detailed local air quality analysis will follow in the Tier 2 NEPA studies to the extent that it is appropriate. Thus, consistent with the USEPA technical comments of November 11, 2002 on the DEIS, the carbon monoxide analysis for suspected hot spot (micro-scale analysis) locations will be performed in the Tier 2 NEPA studies.

## 5.9.3 Regulatory Setting and Methodology

### 5.9.3.1 Overview

The Clean Air Act and the 1990 Clean Air Act Amendments (CAA) required the USEPA to establish National Ambient Air Quality Standards (NAAQS) for pollutants that are considered to be harmful to the public health and environment. The USEPA set forth standards for six principal pollutants – particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), ozone, oxides of nitrogen (NO<sub>x</sub>), and lead. Generally, when levels of pollutants do not exceed the annual average standards and do not exceed the short-term standards more than once per year, an area is considered in attainment of the NAAQS. An area that does not meet the NAAQS for one or more pollutants is known as a “nonattainment area”. An area that was formerly in nonattainment and now meets the NAAQS is known as a “maintenance area” for a period of 20 years. Under the CAA, each state is required to establish a plan for achieving and/or maintaining the NAAQS in nonattainment and maintenance areas. This plan is known as the State Implementation Plan (SIP).

In nonattainment or maintenance areas, the MPO, as the designated agency for transportation planning in the metropolitan area, is required to demonstrate continuing conformity of their LRP and short-range Transportation Improvement Program (TIP) with the mobile emission budgets established in the SIP for air quality. Further, in accordance with the federal transportation metropolitan planning requirements (23 USC 135 and 23 CFR 450), “regionally significant” transportation projects must be included in a LRP and a TIP that have undergone an emissions analysis to demonstrate conformity with the SIP.

The joint FHWA/FTA policy memorandum of May 20, 2003, provides guidance concerning air quality conformity requirements for projects requiring EISs. For a copy of this memorandum, see Appendix K. The memorandum states that:

- Proposed projects must be found to conform to the SIP before they are adopted, accepted, approved, or funded by FHWA or FTA.
- Approval of the FEIS does not permit a project sponsor to proceed with further actions (such as final design or construction). For those subsequent actions to proceed, FHWA or FTA must issue a ROD.
- If full compliance is not possible with the transportation conformity provisions of the CAA at the time the FEIS is prepared, the FEIS can reflect consultation with the appropriate agencies and provide reasonable assurance that the requirements will be met.



## *I-69 Evansville to Indianapolis Final Environmental Impact Statement*

- When the FEIS does not document full completion of the conformity process, it should at a minimum:
- Document consultation and information supporting reasonable assurance that all transportation conformity requirements will be met.
  - Discuss the procedural steps that remain in order for all the transportation conformity requirements to be met, including any interagency consultation remaining, information to be provided, and opportunities for public review and comment.
  - Document hot-spot (micro-scale) analyses.
  - Document compliance with any PM control measures (if applicable).
- When the FEIS does not document full compliance with transportation conformity provisions, the conformity determination must be made prior to the issuance of the ROD.

Inasmuch as the joint FHWA/FTA policy memorandum does not address tiered EISs, the statements above apply to the time of “NEPA process completion”, which occurs at the end of Tier 2. Therefore, these conformity requirements do not have to be completed at the end of the Tier 1, but must be completed at the end of Tier 2.

### **5.9.3.2 Air Quality Status of Metropolitan Areas in Southwest Indiana**

Within the 26-county Study Area, all areas are currently in attainment of the NAAQS. However, Marion and Vanderburgh counties (the northern and southern termini of the project) were at one time designated marginal nonattainment areas for ozone, and now carry an air quality “maintenance area” designation. Therefore, the air quality conformity requirements are applicable to these counties.

In order to comply with conformity requirements, the metropolitan planning organizations (MPOs) in both of these counties must ensure that their long-range transportation plans conform to the emissions budgets for motor vehicles in the SIP. As of the publication of this FEIS, both the Indianapolis MPO (for Marion County) and the Evansville MPO (for Vanderburgh County) have adopted long-range transportation plans that include Preferred Alternative 3C for I-69. The air quality modeling that has been completed for those plans demonstrates that the plans conform to the applicable motor vehicle emissions budgets.

The Bloomington metropolitan area meets all air quality standards. As a result, the Bloomington MPO is not required to demonstrate conformity when adopting its long-range transportation plan. The Bloomington MPO adopted a long-range plan that includes Preferred Alternative 3C on November 14, 2003.

### **5.9.3.3 Air Quality Modeling**

For all I-69 Build Alternatives, regardless of location, regional air quality analyses were conducted for Marion and Vanderburgh counties to identify air quality impacts and to evaluate conformity with the SIP using MOBILE 5 emission factors with Tier 2 Motor Vehicle Emissions Standards. Because maintenance of the NAAQS for mobile sources (cars and trucks) in these two counties for ozone is the issue, the regional air quality analyses focus on the three major precursors to ozone – hydrocarbons (also known as volatile organic compounds or VOCs), CO, and NOX.

After the identification of Alternative 3C as the preferred alternative, additional air quality analyses were conducted by the Indianapolis MPO to demonstrate that the Preferred Alternative 3C would not jeopardize MPO air quality



conformity with the applicable mobile source emission budgets established in the SIP for Marion County. Preferred Alternative 3C lies outside Vanderburgh County; therefore, the conformity requirements in Vanderburgh County are not applicable to this project. However, air quality analyses are being conducted to evaluate the air quality impacts on the Evansville metropolitan area. At the time of publication of this FEIS, the Evansville MPO has begun the process of updating its LRP to reflect the selection of Preferred Alternative 3C for I-69. Modeling results to date indicate that the updated LRP conforms to all applicable NAAQS. Final approval of the updated Evansville LRP is expected by the end of 2003, with a conformity determination by FHWA to follow in early 2004.

**MOBILE 5 versus MOBILE 6.** The MOBILE model for estimating pollution from highway vehicles was first developed by USEPA in 1978. MOBILE 5 was released in 1993, and was used by the Indianapolis MPO on June 30, 2003, for the air quality conformity determinations that included Preferred Alternative 3C in their LRP and TIP. The USEPA released MOBILE 6 on January 29, 2002, as the first major revision to MOBILE since MOBILE 5. MOBILE 6 is based on new emissions data and reflects regulations that have been issued since MOBILE 5.

There are a number of reasons why emissions estimates are different in MOBILE 5 and MOBILE 6. These reasons include new knowledge (such as pollution control technologies in the late 1980s proved to be more durable than had been expected when MOBILE 5 was developed)<sup>1</sup> or new rules (such as the final rule on Tier 2 Motor Vehicle Emissions Standards of February 10, 2000, resulting in more stringent emission requirements for SUVs and pickup trucks).

When the USEPA released MOBILE 6, a two-year grace period ending January 29, 2004, was established to permit the transition from MOBILE 5 to MOBILE 6 for transportation conformity analyses. While the USEPA rule encourages the use of MOBILE 6 or MOBILE 5 with Tier 2 estimates for conformity analyses during the two-year grace period, MOBILE 5 can continue to be used for conformity analyses through January 29, 2004. Only if a state updated emissions budgets in the SIP to MOBILE 6 would transportation conformity analyses using MOBILE 6 be compelled prior to January 29, 2004. For Indiana, the MOBILE 5 emission budgets established in the SIP by IDEM are expected to continue until the SIP is updated for the 8-hour ozone standard area designations. Accordingly, the Indianapolis MPO may continue to use MOBILE 5 for transportation conformity evaluations through January 29, 2004. After that date, the Indianapolis MPO must use MOBILE 6 for any amendments to the TIP or LRP.

The Evansville MPO is be using MOBILE 6 for the air quality evaluation for their updated LRP, which includes the traffic from Preferred Alternative 3C entering Vanderburgh County.

**8-Hour Ozone Standard.** After the deadline for use of MOBILE 5 for emission estimates on January 29, 2004, the next critical date for transportation conformity analyses is the date of April 15, 2004, when USEPA is expected to designate areas as non-attainment for the 8-hour ozone standard. On July 15, 2003, then-Indiana Governor O'Bannon recommended to the USEPA the designation of nine counties in the Indianapolis region (Marion, Morgan, Hendricks, Boone, Hamilton, Madison, Hancock, Shelby, and Johnson counties) as non-attainment for the 8-hour ozone standard, but deferred a recommendation concerning the Evansville region (Vanderburgh, Gibson, Posey, and Warrick) until October of 2003 when summer of 2003 air quality monitoring information would be available for review. Based on the summer of 2003 air quality monitoring information, Governor Kernan recommended to USEPA on October 8, 2003 that, if the USEPA designates any nonattainment area in the Evansville region, it should be confined to Warrick County. On April 15, 2004, when USEPA designates non-attainment counties for the 8-hour ozone standard, there will be a one-year grace period to demonstrate TIP/LRP conformity. USEPA is currently developing procedures for agencies to follow to demonstrate conformity.

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<sup>1</sup> Frequently Asked Questions on MOBILE 6; USEPA; January 16, 2002.



## 5.9.4 Comparative Analysis of Alternatives

### 5.9.4.1 Methodology

To assess the regional air quality impacts and demonstrate I-69 project conformity, vehicle-miles of travel (VMT) for each alternative in Marion and Vanderburgh counties were converted to mobile source emissions and compared to the mobile source emission budgets from the SIP for each county. This analysis was included in the DEIS, and has been updated in the FEIS.

The specific steps involved:

1. Obtaining the VMT by Federal roadway functional classification for each build alternative from the I-69 Statewide Travel Model to determine the change in VMT from the No Build Alternative for the year 2025;
2. Applying the change for each alternative from the No Build Alternative to the VMT for the adopted LRP in Marion and Vanderburgh counties to reflect the addition of each build alternative to the adopted LRP network;
3. Applying the unique emission rates per VMT from MOBILE 5 (with the Tier 2 Motor Vehicle Emissions Standards so as to generally approximate MOBILE 6 emissions)<sup>2</sup> for each county to the VMT for the adopted LRP network with each of the build alternatives to get total daily emissions; and
4. Comparing the daily emissions for each build alternative to the emission budgets established by the SIP for each county.

Because IDEM bases the mobile emission budgets on the VMT reported in the INDOT Highway Performance Monitoring System (HPMS), the VMT from the travel model must be reconciled to HPMS estimates of VMT. In the case of Marion County, the total emissions from the LRP are adjusted to the HPMS before comparison to the emission budgets. In the case of Vanderburgh County, the VMT for the LRP have been adjusted to HPMS before the emission factors are applied.

### 5.9.4.2 Analysis

The results of the comparative air quality analysis appear on the next page in Tables 5.9-1 for Marion County and 5.9-2 for Vanderburgh County. All alternatives conform to the Indianapolis and Evansville MPO “maintenance area” SIP budgets using MOBILE 5 with Tier 2 estimates. As noted below, the Indianapolis MPO completed a formal air quality conformity evaluation using MOBILE 5 on June 30, 2003, for the Preferred Alternative 3C, and the Evansville MPO has completed a conformity evaluation using MOBILE 6 for its updated LRP reflecting Preferred Alternative 3C. (See Appendix K, *Air Quality Analysis* for more detail.)

The following observations are made concerning the comparative air quality impact analysis for **Marion County**:

1. The VMT from the ISTD for all build alternatives exceed that of the No Build Alternative. The build alternatives entering Marion County in the I-70 corridor (i.e., Alternatives 1, 2A, 2B, 3A, 4A, 4B, and 5A) result in lower VMT than the build alternatives entering Marion County in the SR 37 corridor (i.e., Alternatives 2C, 3B, 3C, 4C, and 5B). However, elimination of the Mann Road variation resulted in lower VMT for

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<sup>2</sup> MOBILE 5 Information sheet #8: Tier 2 Benefits Using MOBILE 5; U.S. Environmental Protection Agency; April 2000. “Tier 2” in this context, refers to “Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements” that have been enacted subsequent to the release of the MOBILE 5 emissions factors.



**Table 5.9-1: Marion County Air Quality Analysis (revised for SR 37 alignment changes for 2C, 3B, 3C, 4C, and 5B)**

	2025 LRP	1	2A	2B	2C	3A	3B	3C	4A	4B	4C	5A	5B
Emission (tons/day)													
Entry Corridor		I-70	I-70	I-70	SR 37	I-70	SR 37	SR 37	I-70	I-70	SR 37	I-70	SR 37
VOC Emissions													
HPMS Adjusted Total	60.555	60.543	60.589	60.616	60.484	60.658	60.560	60.566	60.621	60.594	60.487	60.443	60.517
SIP Budget	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70	71.70
Rank (low to high)		5	8	10	2	12	6	7	11	9	3	1	4
CO Emissions													
Adjusted Total	473.876	473.776	474.105	474.243	472.701	474.532	473.270	473.312	474.347	474.074	472.717	472.759	472.938
SIP Budget	521.60	521.60	521.60	521.60	521.60	521.60	521.60	521.60	521.60	521.60	521.60	521.60	521.60
Rank (low to high)		7	9	10	1	12	5	6	11	8	2	3	4
NOX Emissions													
HPMS Adjusted Total	44.895	44.893	44.937	44.991	45.107	45.037	45.164	45.181	44.965	44.974	45.111	44.933	45.140
SIP Budget	63.10	63.10	63.10	63.10	63.10	63.10	63.10	63.10	63.10	63.10	63.10	63.10	63.10
Rank (low to high)		1	3	6	8	7	11	12	4	5	9	2	10

**Table 5.9-2: Vanderburgh County Air Quality Analysis**

	2025 LRP	1	2A	2B	2C	3A	3B	3C	4A	4B	4C	5A	5B
Emission (tons/day)													
Entry Corridor		US 41	US 41	US 41	US 41	SR 57	SR 57	SR 57	SR 57	SR 57	SR 57	SR 57	SR 57
VOC Emissions													
HPMS Adjusted Total	7.372	7.598	7.629	7.616	7.636	7.550	7.540	7.545	7.530	7.530	7.538	7.522	7.531
SIP Budget	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91	10.91
Rank (low to high)		9	11	10	12	8	6	7	3	2	5	1	4
CO Emissions													
HPMS Adjusted Total	53.334	55.003	55.222	55.127	55.268	54.806	54.736	54.766	54.658	54.661	54.722	54.579	54.648
SIP Budget	77.94	77.94	77.94	77.94	77.94	77.94	77.94	77.94	77.94	77.94	77.94	77.94	77.94
Rank (low to high)		9	11	10	12	8	6	7	3	4	5	1	2
NOX Emissions													
HPMS Adjusted Total	8.159	8.521	8.553	8.545	8.567	8.514	8.509	8.504	8.484	8.489	8.498	8.468	8.476
SIP Budget	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56	11.56
Rank (low to high)		9	11	10	12	8	7	6	3	4	5	1	2



## *I-69 Evansville to Indianapolis*

### *Final Environmental Impact Statement*

Alternatives 2C, 3B, 3C, 4C, and 5B than shown in the DEIS. The updated data, reflecting the selection of the SR 37 corridor, has been included in the FEIS. Preferred Alternative 3C has the highest VMT.

2. When changes over the No Build Alternative VMT are applied to the LRP roadway network for the year 2025, two of the build alternatives (i.e., Alternatives 1 and 5A) result in less VMT than the LRP. In comparison to the I-69 Statewide Travel Model network, the Indianapolis LRP reflects a more extensive roadway network, includes a representation of “local” roads, and includes major roadway improvements beyond the No Build Alternative. Thus, the VMT for build alternatives when added to the LRP no longer result in build alternatives in the SR 37 corridor always having a higher VMT than those in the I-70 corridor. Yet, Preferred Alternative 3C still has the highest VMT.
3. Because emission rates per VMT for VOCs and CO increase as one moves from the highest to lowest roadway functional class (due to a decrease in speeds), changes in the composition of the total VMT by roadway functional class affect total emissions. Thus, the build alternatives with a greater concentration of Interstate VMT have the lowest VOC and CO emissions – Alternatives 2C, 4C, 5A, and 5B; these emissions are even below that for the LRP without I-69. In contrast, Alternatives 2A, 2B, 3A, 4A, and 4B have the highest VOC and CO emissions, exceeding that of the LRP. Overall, Alternative 5A has the lowest VOC and Alternative 2C has the lowest CO emissions. Alternative 3A has the highest VOC and CO emissions.
4. Because the NOX emission rates per VMT are higher for urban Interstates than other arterials in Marion County, build alternatives in the I-70 corridor have lower NOX emissions than those in the SR 37 corridor because alternatives in the SR 37 corridor add more urban Interstate. Thus, Alternative 1 has the lowest NOX emissions (slightly below the LRP), followed by Alternatives 5A, 2A, 4A, and 4B (that are slightly higher than the LRP). Preferred Alternative 3C has the highest NOX emissions followed by Alternative 3B.
5. **Because all alternatives fall under the SIP emissions budgets when added to the Indianapolis LRP, the addition of any alternative to the LRP would not jeopardize conformity with the SIP. Refer below to the air quality conformity analysis for Marion County performed by the Indianapolis MPO for Preferred Alternative 3C.**

The following observations are made concerning the comparative air quality impact analysis for Vanderburgh County:

1. The VMT from the ISTD for all the build alternatives exceed that of the No Build Alternative. The average VMT of the four build alternatives entering Vanderburgh County in the US 41 corridor (i.e., Alternatives 1, 2A, 2B, and 2C) is higher than the average VMT of the eight build alternatives entering in the SR 57 corridor (i.e., Alternatives 3A, 3B, 3C, 4A, 4B, 4C, 5A, and 5B). Alternative 2C has the highest VMT in the US 41 corridor, followed by Alternative 3B in the SR 57 corridor. Alternatives 5A and 5B have the lowest VMT.
2. When changes over the No Build Alternative VMT are applied to the LRP roadway network for the year 2025, all the build alternatives result in more VMT than the LRP (adopted in the year 2000). In comparison to the I-69 Statewide Travel Model network, the Evansville LRP reflects a more extensive roadway network, includes a representation of “local” roads, and includes major roadway improvements beyond the No Build Alternative. Adjustments for the HPMS result in all build alternatives in the US 41 corridor having higher VMT than alternatives in the SR 57 corridor.
3. With the exception of rural Interstates, emission rates per VMT for VOCs and CO increase as one moves from the highest to lowest roadway functional class. However, because the VMT are lower for all alternatives in the SR 57 corridor than alternatives in the US 41 corridor, the eight alternatives in the SR 57 corridor



(Alternatives 3A, 3B, 3C, 4A, 4B, 4C, 5A, and 5B) have lower emissions than the four alternatives in the US 41 corridor (Alternatives 1, 2A, 2B, and 2C). Overall, Alternative 5A had the lowest VOC and CO emissions, followed by Alternative 5B; and Alternative 2C had the highest VOC and CO emissions.

4. NOX emission rates per VMT drop as one moves from the higher to lower roadway functional classes in Vanderburgh County. However, because VMT are lower for all alternatives in the SR 57 corridor than alternatives in the US 41 corridor, all alternatives in the SR 57 corridor (Alternatives 3A, 3B, 3C, 4A, 4B, 4C, 5A, and 5B) have lower emissions than the alternatives in the US 41 corridor (Alternatives 1, 2A, 2B, and 2C). Overall, Alternative 5A had the lowest NOX emissions, followed by Alternative 5B; and Alternative 2C had the highest NOX emissions.
5. **Because all alternatives fall under the SIP emissions budgets when added to the Evansville LRP (adopted in the year 2000), the addition of any alternative to the LRP would not jeopardize conformity with the SIP. Refer below to the air quality conformity analysis for Vanderburgh County performed for Preferred Alternative 3C.**

### 5.9.4.3 Summary of Comparative Analysis Impacts

For Marion County, build alternatives entering the county along the SR 37 corridor generally have lower VOC and CO emissions than the alternatives in the I-70 corridor, but the highest NOX emissions, when added to the adopted LRP network. Alternatives 2C, 4C, 5A, and 5B have the lowest VOC and CO emissions, even lower than the LRP. Alternative 3A has the highest VOC and CO emissions. For NOX emissions, Alternative 1 had the lowest emissions, followed by 5A, 2A, 4A, and 4B. Preferred Alternative 3C has the highest NOX emissions. Nevertheless, as shown in Table 5.9-1, the addition of any build alternative to the Indianapolis LRP will not jeopardize conformity with the SIP for Marion County.

For Vanderburgh County, build corridor alternatives entering the county in the SR 57 corridor (Alternatives 3A, 3B, 3C, 4A, 4B, 4C, 5A, and 5B) have lower VOC, CO, and NOX emissions than the alternatives in the US 41 corridor (Alternatives 1, 2A, 2B, and 2C). Alternative 5A has the lowest emissions, and Alternative 2C has the highest emissions in all three categories. Nevertheless, the addition of any build alternative to the Evansville LRP will not jeopardize conformity with the SIP for Vanderburgh County.

## 5.9.5 Conformity Findings

### 5.9.5.1 Indianapolis

On June 30, 2003, the Indianapolis MPO completed a formal air quality conformity analysis to update the LRP that included Preferred Alternative 3C. The Air Quality Conformity Analysis report demonstrates that inclusion of Preferred Alternative 3C results in emissions well below the SIP emission budgets for Marion County, and that the updated LRP meets air quality conformity in accordance with Section 176(c) of the Clean Air Act. Using MOBILE 5 emission parameters (as the MOBILE 6 model has not yet been installed in the regional travel demand model), the Indianapolis MPO Air Quality Conformity Analysis (June 30, 2003) document reports for the updated LRP with Preferred Alternative 3C:

- 58.10 tons per day of hydrocarbons (VOCs), which is under the SIP budget of 71.70 tons per day;
- 427.87 tons per day of CO, which is under the SIP budget of 521.60 tons per day; and
- 60.46 tons per day of NOX, which is under the SIP budget of 63.10 tons per day.



## *I-69 Evansville to Indianapolis*

### *Final Environmental Impact Statement*

In consultation with IDEM, INDOT, FHWA, and FTA, the results of the formal Air Quality Conformity Analysis of June 30, 2003, for Preferred Alternative 3C performed by the Indianapolis MPO resolves the issue of possible exceedance of the NOX emissions budget that was raised by the Indianapolis MPO letter of November 6, 2002, commenting on the DEIS. The difference between the earlier air quality analysis by the Indianapolis MPO and the formal air quality conformity evaluation of June 30, 2003, is primarily attributable to a significant reduction in the VMT in Marion County by elimination of the Mann Road variation to alternatives in the SR 37 corridor, but a variety of other factors are involved. (See Appendix K, *Air Quality Analysis* for further explanation of the differences between the air quality analysis conducted for the DEIS and the final conformity evaluation by the Indianapolis MPO.)

#### 5.9.5.2 Evansville

The southern terminus of Preferred Alternative 3C at the I-64/I-164 interchange does not physically intrude into Vanderburgh County. Therefore, a conformity determination for the Evansville area is not needed for this project. However, an air quality analysis was performed for the Evansville area, where Vanderburgh County is a “maintenance area” for ozone. For the purposes of this analysis, external traffic<sup>3</sup> from Preferred Alternative 3C was added to the Evansville MPO long range plan (as adopted in 2000), which already includes a second bridge over the Ohio River from I-164 to the Pennyrile Parkway serving as the placeholder for the I-69 connection from Evansville to Henderson. An air quality analysis (dated June 30, 2003) found that the emissions (calculated on the basis of MOBILE 6 emission factors) of the LRP with changes in external traffic for Preferred Alternative 3C did not exceed the emissions budget for Vanderburgh County, as currently established by the SIP for air quality.

The air quality analysis was performed for the inclusion of external traffic from Preferred Alternative 3C in the Evansville MPO’s LRP, as adopted in the year 2000. This air quality analysis demonstrates that inclusion of Preferred Alternative 3C in the LRP is well below the SIP emission budgets for Vanderburgh County. Using MOBILE 6 emission parameters provided by IDEM, the air quality analysis for LRP (as adopted in the year 2000) shows:

- 2.07 tons per day of VOCs without Preferred Alternative 3C external traffic and 2.19 tons per day with Preferred Alternative 3C, which are under the SIP budget of 10.91 tons per day;
- 38.21 tons per day of CO without Preferred Alternative 3C external traffic and 40.27 tons per day with Preferred Alternative 3C, which are under the SIP budget of 77.94 tons per day; and
- 2.05 tons per day of NOX without Preferred Alternative 3C external traffic and 2.05 tons per day with Preferred Alternative 3C, which are under the SIP budget of 11.56 tons per day.

On December 4, 2003, the Evansville MPO updated its LRP to include the external traffic from Preferred Alternative 3C and possible adjustments to major transportation investments in the Evansville-Henderson Urbanized Area. The plan update reflects the latest assumptions for I-69 and other major transportation investments, including a formal air quality conformity analysis, which was done on June 30, 2003.

#### 5.9.5.3 Conformity Conclusion

**In conclusion, it is anticipated that Preferred Alternative 3C will not jeopardize air quality conformity with the applicable mobile source emissions budgets of the SIP for Marion and Vanderburgh counties.**

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<sup>3</sup> External traffic is traffic that passes through or has one trip end inside Vanderburgh County.



## 5.9.6 Tier 2 EIS Air Quality Analyses

In Tier 2, if there is a substantial change in design concept and scope of Preferred Alternative 3C in the Indianapolis MPO area, transportation air quality analyses will be rerun to demonstrate conformity with applicable NAAQS as well as the rules and policies of USEPA and USDOT in effect at that time.

In the case of the Indianapolis region, the Indianapolis MPO will have to use MOBILE 6 for motor vehicle emissions estimates after January 29, 2004, and will likely have to demonstrate conformity of nine counties (Marion, Morgan, Hendricks, Boone, Hamilton, Madison, Hancock, Shelby, and Johnson counties) that have been recommended by the Governor of Indiana to USEPA as non-attainment for the 8-hour ozone standard, assuming USEPA concurrence on April 15, 2004.

In the case of the Evansville region, the Evansville MPO already has MOBILE 6 in place for motor vehicle emissions estimates, and will have to demonstrate conformity for any projects in Vanderburgh County to the 1-hour ozone standard for Vanderburgh County and to the 8-hour ozone standard for any counties (Vanderburgh, Posey, Gibson, or Warrick) designated as non-attainment by the USEPA as expected on April 15, 2004. Preferred Alternative 3C is located outside Vanderburgh County and is not subject to the conformity requirements.

In addition to ozone air quality analyses, the Tier 2 NEPA studies must include local (micro-scale) air quality analyses as required by NEPA. In particular, carbon monoxide analyses will be run for interchanges along I-69 at suspected hot spot (micro-scale analysis) locations, and the results will be reported in the Tier 2 EIS documentation.

In a tiered process, "NEPA process completion" occurs at the end of Tier 2. Accordingly, based on the joint FHWA/FTA policy memorandum of May 20, 2003, the conformity determination must be completed prior to the issuance of the Tier 2 ROD.