



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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June 30, 2011

Ms. Janice Osadcuk
Team Leader, Environmental Services
U.S. Department of Transportation
Federal Highway Administration
575 North Pennsylvania Street, Room 254
Indianapolis, Indiana 46204

SUBJECT: EPA review and scoping comments for the
Draft Supplemental Environmental Impact Statement (DSEIS) for the
Proposed Louisville – Southern Indiana Ohio River Bridges Project

Dear Ms. Osadcuk:

The U.S. Environmental Protection Agency (EPA) Regions 4 and 5 received your scoping information packet regarding the Ohio River Bridges Project. Thank you for your continuing coordination with us. We reviewed your documents and are providing the enclosed comments.

As we discussed at the May 26, 2011 Resource Agency Coordination Meeting, the DSEIS is required in order to update environmental impact data and project plans which have changed since the earlier EISs and the 2003 Record of Decision for this project were published. We note that the Purpose and Need has not changed.

These comments are provided based on the recent information you provided. Impacts should be avoided and minimized to the extent feasible. If substantial changes to project plans occur, we may have additional comments as the project proceeds. If you have questions, please contact Ramona McConney, EPA Region 4 at (404)562-9615, or Virginia Laszewski, Region 5 at (312) 886-7501.

Sincerely,

A handwritten signature in blue ink, appearing to read "Heinz J. Mueller", is located below the "Sincerely," text.

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

Cc: Gary Valentine, KYTC
Paul Boone, INDOT

EPA review and scoping comments for the
Draft Supplemental Environmental Impact Statement (DSEIS) for the
Proposed Louisville – Southern Indiana Ohio River Bridges Project

Proposed Environmental Analysis Methodology

In general, EPA concurs with the 3-step evaluation process and the resources to be assessed in the upcoming DSEIS as identified in the Meeting Summary of the May 26, 2011 Resource Agency Coordination Meeting for this project. We also have the following comments regarding the upcoming DSEIS and the proposed environmental analysis methodology and documentation for the DSEIS.

Since it has been eight years since the 2003 EIS/Record of Decision (ROD), the DSEIS should contain a full environmental analysis of impacts associated with each DSEIS alternative identified for evaluation (DSEIS alternatives have not yet been finalized). If information from the 2003 EIS is still relevant, please include this information in the DSEIS and/or provide a concise summary of the relevant 2003 information in the DSEIS and provide a detailed reference to the 2003 EIS/ROD (volume/chapter/appendix, section, page numbers, chapters, sentences and/or tables) where the specific information can be found. EPA is concerned that most reviewers do not have access to, or the time needed, to quickly find the referred to information in the voluminous materials that make up the 2003 EIS documentation.

Alternatives

Currently, FHWA/INDOT/KYTC proposes three alternatives for evaluation in the DSEIS:

1. No-action / No build.
2. The Selected Alternative (as approved by the 2003 ROD) with tolls.
3. A Modified version of the Selected Alternative with tolls and the following cost-saving alternatives: rebuild the Kennedy Interchange in-place; remove the pedestrian walkway/bikeway from the Downtown Ohio River Bridge; and reduce the East End Bridge and approaches from six lanes to four lanes, with the option to widen to six lanes in the future.

At this time, EPA recommends the following additional alternatives be evaluated in the DSEIS:

4. The Selected Alternative (as approved by the 2003 ROD with updated information - e.g., financing/cost) **without tolls**.
5. A Modified version of the 2003 Selected Alternative **without tolls** and the following cost-saving alternatives: rebuild the Kennedy Interchange in-place; remove the pedestrian walkway/bikeway from the Downtown Ohio River Bridge; and reduce the East End Bridge and approaches from six lanes to four lanes, with the option to widen to six lanes in the future.

Alternatives Analysis

We understand that the proposed reconstruction of the Kennedy interchange in-place would implement a cost-saving approach, as compared to previous interchange placement designs from earlier EISs and the ROD. The DSEIS should evaluate how this change in plan will meet the

project's purpose and need, the effects of this change on traffic flow, safety, and environmental impacts, as well as community and environmental justice (EJ) impacts.

The DSEIS should evaluate the impacts of the East End bridge, roadway and tunnel. We note that current design plans call for four lanes, with the option to add two additional lanes if future traffic demand warrants. Since the plan for four lanes is a proposed cost-saving measure and differs from plans in previous EISs and the ROD (six lanes), the DSEIS should document the advantages and disadvantages of the proposed four lane facility, and the impacts of this change as compared to previous design plans, as well as environmental and community impacts.

The DSEIS should evaluate the removal of the pedestrian/bikeway facility from the design of the Downtown I-65 Bridge (as compared to earlier design plans from the previous EISs and ROD). Since this change in bridge design is a cost-saving measure and elimination of the pathway has been proposed because of a separate project to complete the Big Four Bridge pedestrian walkway and bike path, the DSEIS for the Ohio River Bridges Project should include a map showing the location of the Big Four Bridge relative to the proposed Ohio River Bridges project facilities, clarify the status of the Big Four Bridge project regarding its construction/completion timeline, describe the access for bikers and pedestrians, and have information regarding the anticipated amount of pedestrian/bikeway traffic.

The U.S. Army Corps of Engineers (Corps) 2007 Environmental Assessment (EA) for the Big Four Bridge stated that there were no plans to provide access from Indiana onto the bridge. In February 2011, the Governors of Kentucky and Indiana jointly announced updated plans for the bridge, including a ramp to be constructed to provide access into Jeffersonville, Indiana. Updated information regarding the proposed design, construction timeline and Jeffersonville ramp access should be discussed in the DSEIS as they relate to the Ohio River Bridges Project.

Finally, the DSEIS should discuss whether the lack of a pedestrian/bikeway facility on the Downtown I-65 Bridge would significantly deter bike and pedestrian traffic in that area, and whether increased motor vehicle traffic could result, and therefore air emissions, as the result of a lack of pedestrian/bikeway facility on the Downtown I-65 Bridge.

We note that the DSEIS will also evaluate tolling of the new bridges as a financing strategy. The DSEIS should clarify how tolls will be collected (e.g., will toll booths or other facilities require construction?). We recommend that the DSEIS explain what the tolls are expected to be used for (e.g., to pay for all or part of project construction costs, pay for maintenance costs, mitigation costs, subsidize other roadway projects in Indiana and/or Kentucky, etc.). Also, the DSEIS should describe the effect that tolls will have on traffic, commuters, and residents, and whether the tolls would present disproportionate impacts to low-income motorists. The DSEIS should identify whether or not bridge tolling is expected to be permanent or temporary, and then assess relevant potential impacts accordingly. In addition, the impacts of the infrastructure required to support tolling (such as toll booths) should be evaluated.

Air Quality

We note that a modified version of the selected Two Bridges/Highway Alternative with tolls will be included in the DSEIS. We note that the Far East Bridge, roadway, and tunnel will be reduced (as compared to earlier plans identified in the ROD) from six lanes to four lanes. The Transportation Conformity requirements state that the project's design, concept, and scope must be consistent with the project as it is envisioned in the Long Range Transportation Plan (LRTP). Therefore, before the final ROD is signed, the change in scope of the project must be reflected in the LRTP.

The project area is currently maintenance for ozone and non-attainment for the annual PM_{2.5} standard. A modified version of the selected Two Bridges/Highway Alternative with tolls will be included in the DSEIS. Because the area is nonattainment for PM_{2.5}, the proposed toll booth locations should be evaluated for traffic congestion, and may need hot spot modeling if the number of trucks or expected idling could cause or contribute to a violation of the standard under the National Ambient Air Quality Standards (NAAQS). We note that the Far East Bridge, roadway, and tunnel will be reduced (as compared to earlier plans identified in the ROD) from six lanes to four lanes. The vehicle emissions could become concentrated in the tunnel. The FHWA will need to analyze how the toll booth locations may affect vehicle queuing and hot-spot emissions, including air quality in the tunnel area. We recommend the DSEIS discuss the likelihood that FHWA will be able to demonstrate conformity for each DSEIS alternative.

In addition, the DSEIS should identify how exhaust in the proposed tunnels would be vented and the locations of those vents. The DSEIS should provide an evaluation of the potential for localized adverse air quality impacts, including mobile source air toxics (see *Mobile Source Air Toxics (MSATs)* discussion below), to the people living in the neighborhoods and communities in the vicinity of emissions vents and/or proposed toll booths or other areas that may be prone to congestion. Potential mitigation measures to avoid, reduce and compensate for any potential adverse impacts should be identified in the DSEIS.

Greenhouse Gas (GHG) Emissions

The GHG discussion in the DSEIS should address both construction and operational impacts from the proposed project. The Council on Environmental Quality (CEQ) issued draft guidance on when and how federal agencies must consider GHG emissions and climate change in their proposed action. While this guidance is not yet final, further data collection may be necessary in the future regarding GHG emissions from this project.

Climate Change

The EPA is committed to identifying and responding to the challenges that a changing climate poses to human health and the environment. Adaptation will require that the EPA anticipate and plan for future changes in climate and incorporate considerations of climate change into many of its programs, policies, rules and operations to ensure they are effective under future climatic conditions. Please see the EPA's Policy Statement on Climate-Change Adaptation at <http://www.epa.gov/climatechange/effects/downloads/adaptation-statement.pdf>

Due to potential increased severity and intensity of precipitation events due to climate change, the DSEIS should identify and evaluate impacts to the proposal and any proposed design measures that could be undertaken to reduce impacts. This might include, but is not limited to, identifying how proposed tunnels, bridges and stormwater treatment areas might be designed (type/size) to accommodate increased floodwaters and treat stormwater runoff and/or inadvertent hazardous materials spills during such events. This assessment should also include impacts to proposed smaller bridges and/or culverts associated with the project's smaller stream crossings (e.g., Harrods Creek, Beargrass Creek, on the Kentucky side and other streams on the Indiana side, including intermittent and headwater streams).

Mobile Source Air Toxics (MSATs)

The Clean Air Act requires EPA to control hazardous air pollutants (or "air toxics") from mobile and stationary sources. EPA identified a group of 21 mobile source air toxics (MSATs), which are set forth in an EPA final rule, Control of Emissions of Hazardous Air Pollutants from Mobile Sources (66 FR 17235, March 29, 2001). Most recently, EPA has published another proposal to further control mobile source air toxics (71 FR 15804, March 29, 2006). In this proposal, EPA identifies seven MSATs of greatest concern because of their contribution to cancer and/or noncancer risk: benzene, 1,3-butadiene, formaldehyde, acrolein, polycyclic organic matter, naphthalene, and diesel exhaust (specifically, diesel particulate matter and diesel exhaust organic gases).

There is heightened concern for human health from projects that result in mobile source air toxics emissions and particulate matter, particularly diesel exhaust. A large number of human epidemiology studies show increased lung cancer associated with diesel exhaust and significant potential for non-cancer health effects.

Consequently, EPA recommends that the DSEIS disclose potential MSAT emission impacts resulting from each of the build alternatives (including construction activities) for purposes of comparison, including a discussion of the resulting cancer and non-cancer health effects associated with emissions of, at a minimum, benzene, 1,3-butadiene, formaldehyde, acrolein, and diesel exhaust (specifically, diesel particulate matter and diesel exhaust organic gases). Particular attention should be given to populated areas near proposed toll booths and tunnel exhaust vents.

If additional air toxics are associated with the project that may substantively impact the study area, they should be included in the analysis as well. The specific human populations to be assessed should include the general population as well as sensitive receptor populations such as schools, healthcare facilities (e.g., hospitals), elderly populations, and environmental justice communities. Both regional and near roadway impacts (typically within 200 meters of the project) should be considered.

Such analyses should include, for example: (1) the disclosure of all locations at which exposures to sensitive receptors may increase because of construction, widening or moving roads and ramps, increased traffic, increased diesel traffic, or increased loads on engines; and (2) an assessment of the factors that could influence the degree of adverse impact on the population

such as the amount of construction activity, proximity of construction to people, etc. Analytical approaches that will lead to an understanding of potential increases (or decreases) in exposures to these target populations will typically require the development of emissions inventories for the various build alternatives and may also require dispersion modeling. The analysis should assess the cumulative impact posed by the project in combination with exposures to chemicals that result from other sources which impact the study area.

Clean Diesel Recommendations

Reducing emissions from diesel engines is one of the most important public health challenges facing the country. Potential emissions from diesel engines include high levels of particulate matter, hydrocarbons and carbon monoxide. Emissions from diesel engines during potential queuing of trucks at toll booths and during project construction are a particular concern in this populated urban area. These emissions can be controlled through strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment; and the use of advanced pollution control technology such as diesel oxidation catalysts or particulate filters, that can be installed on the exhaust of the diesel engine. Retrofits are a cost effective and efficient means to control emissions, and have been successfully applied to many diesel engines across the country.

Therefore, EPA recommends that the project implement overall diesel emission reduction activities through various measures such as: switching to cleaner fuels, retrofitting current equipment with emission reduction technologies, repowering older engines with newer cleaner engines, replacing older vehicles, and reducing idling through operator training and/or contracting policies. EPA can assist in the future development or implementation of these options. We recommend the DSEIS identify proposed emission reduction activities that could be undertaken to reduce diesel emissions. These reduction strategies can then be incorporated into construction bid specifications and contracts.

Water Quality

Potential impacts of the various alternatives on surface and ground water quality, including public and private drinking water supplies, should be addressed in the DSEIS (see *Wellhead Protection Areas (WHPAs)* section below). Mitigation measures should be identified.

The potential impacts to water resources associated with stormwater runoff and/or inadvertent hazardous materials spills on the roadway/bridges or in the tunnels are of particular concern. The DSEIS should address how the project could be designed to redirect stormwater and hazardous materials spills off the roadway/bridges and from the tunnels to areas for detention and, if necessary, treatment prior to release to surface or ground water. Also, de-icing materials should be specifically addressed as a material that needs to be controlled in the stormwater runoff. We recommend that potential retention and treatment areas for the various alternatives be identified in the DSEIS. In addition, best management practices (BMPs) should be implemented during construction in order to protect water resources.

Streams

The DSEIS should provide an update on the quality/condition of the Ohio River and the various streams in the project area, including identification of any total maximum daily loads (TMDLs) for a particular stream. Measures to avoid and minimize impacts to all streams, including headwater and intermittent streams, should be discussed in the DSEIS. We recommend bridging across streams and their 100-year floodplain when feasible, to help maintain the stream bed in its natural state and provide access for wildlife under the bridge/roadway.

Wellhead Protection Areas (WHPAs)

We note that wellhead protection areas (WHPAs) occur in the project area in both Kentucky and Indiana. The project team should ensure that proper construction practices are followed, and that coordination takes place to determine whether any site-specific protection measures are needed for the identified public water supplies.

The DSEIS should also include an evaluation of the effects of the project on water supply related to the amount of impervious surfaces to be constructed. Alternative minimization strategies such as pervious concrete or porous pavement should be considered to help offset impacts, in areas where feasibility and safety requirements are met. Alternative paving materials have additional environmental benefits besides groundwater recharge, including reduced stormwater runoff and reduced pollution.

Wetlands

We understand that wetland delineations are currently underway. The DSEIS should clarify whether any of the modified alternatives being investigated will impact wetlands, as well as evaluating measures taken for avoidance and minimization of impacts. If wetland impacts will occur, the DSEIS should include a draft wetland mitigation plan.

Noise

In addition to operational impacts, construction impacts should also be disclosed and minimized. The expected construction time should be disclosed in the DSEIS to help assess the magnitude of construction impacts. Efforts should be made to minimize construction impacts in terms of fuel choice and engine tuning of equipment, site selection for staging areas, working hours during the day, limiting open burning, use of shielding (hush-houses) for stationary equipment, fugitive dust control, and other areas.

In addition to traffic noise affecting residences and commercial sites along roadways, it should be noted, relevant to the proposed project, that traffic across bridges can be particularly noisy. This is because bridges are high and exposed, sound travels well and is unimpeded over water, and vehicle tires traveling across expansion joints produce additional noise.

We understand that the type of roadway surfacing material used may substantially influence the amount of noise impacts generated. As long as feasibility and safety requirements are met, we recommend surfacing materials that minimize noise.

Environmental stewardship should include measures to avoid and minimize noise impacts. If noise walls are not feasible, then other measures such as vegetative barriers and earthen berms should be considered to minimize noise to impacted receptors.

Environmental Justice (EJ)

We appreciate your consideration of EJ issues in your analysis methodology. The EJ assessment should identify EJ communities in the project area, determine whether these communities would bear disproportionate impacts from the project, give details regarding plans for meaningful involvement by EJ communities, and list the benefits and burdens of the project on residents and EJ communities in the impact area. Community cohesion issues should also be taken into consideration during the scoping period. If project impacts will be disproportionate, mitigation measures should be evaluated, and the affected communities should have meaningful involvement in the mitigation discussion.

The upcoming DSEIS should include updated demographic information and identify EJ populations and data sources. Demographic information is available from the U.S. Census Bureau (www.census.gov), and the U.S. Bureau of Labor Statistics (www.bls.gov). EPA guidance for *Consideration of EJ in Clean Air Action Section 309 Reviews and Incorporating EJ Concerns in EPA's NEPA Compliance Analyses* is available at: <http://www.epa.gov/compliance/resources/policies/nepa/index.html>

Publicly available EPA Web-based tools can also be used to conduct preliminary screening level EJ reviews: *EJView* (<http://epamap14.epa.gov/ejmap/entry.html>) and *NEPAssist* (<https://nepassist.epa.gov/nepave/entry.aspx>). EJ Maps of the surrounding communities that indicate the proximity of communities with potential EJ concerns to the proposed project alignment should be included in the DSEIS. Information from these sources should be used in conjunction with information acquired the public involvement, community interviews, surveys and/or ground verification processes.

Since tolling as a revenue source will be evaluated in the DSEIS, the effects of tolling on communities in the project's impact area needs to be disclosed. In addition, public participation and outreach activities should include EJ communities and other stakeholders that will be impacted by the construction and operation of the new bridges.

Regardless of the makeup of the affected population, adverse impacts of the project should be controlled so that significant effects on human health are avoided and/or minimized. In addition, cumulative and secondary impacts of the project on EJ communities should also be considered and discussed in the DSEIS.

Threatened and endangered species

EPA will defer to the U.S. Fish and Wildlife Service (FWS) regarding potential project impacts to federally-protected species. The DSEIS should clarify whether there are any threatened or endangered species located in or near the proposed project sites. In addition, mitigation for impacts should be addressed in the DSEIS.

Secondary and cumulative impacts

EPA has concerns about how indirect and cumulative impacts could affect species and communities, air, water quality and habitat. The DSEIS should give a detailed analysis of secondary and cumulative impacts. Indirect impacts are those impacts that would not occur but for the proposed project. These impacts should be listed and discussed, including those facilities that would be induced to locate in the project area due to accessibility due to the new bridges and roadways. Indirect impacts would also be associated with any other infrastructure improvements, such as utilities needed for new development induced by the bridges.

The cumulative impacts analysis should document those ongoing and proposed projects in the foreseeable future within the project area that would impact the same resources as the proposed bridges. As part of the secondary/cumulative impacts re-evaluation, the DSEIS should identify if the local communities have implemented or updated their local comprehensive plans and/or implemented or updated zoning and/or other ordinances to better protect natural resources in their communities since the 2003 EIS/ROD.

Historic Preservation

We note that the National Historic Preservation Act Section 106 Process will be reinitiated in accordance with the existing Memorandum of Agreement. Based on the information in the document, there are historic preservation and cultural resource issues that will need to be finalized with the State Historic Preservation Officers (SHPOs) in both Indiana and Kentucky.

The DSEIS should reflect the project team's coordination with the SHPOs. The DSEIS should discuss procedures for events such as unearthing archaeological sites during prospective construction. Typical procedures include work cessation in the area until the SHPO is notified and grants approval of continued construction.

We understand that properties near the Big Four Bridge in Indiana may be eligible for listing in the National Register of Historic Places. Coordination should continue with the Indiana and Kentucky SHPOs regarding the bridge design plans, and the plans for the Jeffersonville ramp access.