To: Berry, Laura[berry.laura@epa.gov]; Russ, Timothy[Russ.Tim@epa.gov]; Dresser, Chris[Dresser.Chris@epa.gov]; VanGessel, Benjamin[vangessel.benjamin@epa.gov]; Patulski, Meg[patulski.meg@epa.gov]
Cc: Bailey, Chad[bailey.chad@epa.gov]
From: Owen, Chris
Sent: Thur 12/22/2016 5:11:59 PM
Subject: Re: I-70 East Project - Request to FHWA for Additional Information and Preliminary Comments/Observations

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So, not sure I am on topic, but just chiming in on the things I have been thinking about since the call yesterday.

thanks

Chris

R. Chris Owen, PhD

U.S. EPA/OAR/OAQPS/AQAD

Room C431A
109 TW Alexander Drive

Research Triangle Park, NC 27711

Phone: 919-541-5312
Fax: 919-541-0044

From: Berry, Laura
Sent: Thursday, December 22, 2016 11:49 AM
To: Russ, Timothy; Dresser, Chris; VanGessel, Benjamin; Patulski, Meg
Cc: Owen, Chris; Bailey, Chad
Subject: RE: I-70 East Project - Request to FHWA for Additional Information and Preliminary Comments/Observations

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Please cc Meg, Ben, and me on whatever you send – I can forward to Chris O/Chad, if you want to limit addressees.

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Page 6 of the "Draft Air Quality Conformity Technical Report" states:

"The approach to the air quality analysis has been documented throughout the I-70 East Project in the Air Quality Analysis Protocol and its updates. The procedures in this document [the protocol] have been reviewed through the Interagency Consultation process for each step in the NEPA process."

Page 1 of the "Air Quality NEPA Comparison Technical Report" states,

"The Interagency Consultation process continued to support the air quality analysis through the review of the updated … [CO and PM10] modeling completed for the ROD." (p. 1, lines 22-25).

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Through Interagency Consultation, it was confirmed that some of the content of the Final EIS need not be revised based on the updates noted above. Items not updated in this document include the emissions inventory of health-based National Ambient Air Quality Standards (NAAQS), mobile source air toxics (MSATs), and greenhouse gases (GHGs). In the Final EIS, the project examined regional emissions of these pollutants on a broad scale and followed FHWA guidance in *Interim Guidance Update on Mobile Source Air* 5 *Toxic Analysis in NEPA (December 6, 2012)*.

The Final EIS included an emissions inventory of atmospheric carbon dioxide for all alternatives discussed. Though there is new GHG guidance, Interagency Consultation with FHWA, EPA, and APCD confirmed that it is not necessary to repeat this analysis because of the following reasons:

- Changes to the project design are minimal, so changes to results of analysis at the air quality study area level—which includes the entire project, as well as the surrounding local road network—would not be noticeable

- The regional air quality inventory analysis is primarily a trend-line comparison between project alternatives. The Final EIS adequately discusses these trends for the use of a NEPA comparison 14 and updates to the analysis for the ROD would not alter previously shown regional air quality trends

 The new GHG guidance states that projects that have published a Final EIS are not required to update their analysis

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Second, the Draft also points to the wrong version of the PM hot-spot guidance in several places. Page 8, line 4 of the Draft Conformity Technical Report has the November 2013 document number instead of the November 2015 document number. Page 5, line 14 of the Air Quality NEPA Comparison Report also has the November 2013 document number.

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To help us in our review of the analysis, we have the following requests for additional documentation:

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3. EPA would like a guide to AERMOD input/output file names to help us understand which project alternatives go with which AERMOD file names.

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We appreciate your time in getting us this information as soon as possible, given we are within the 30 day comment period and several of us will be out of the office over the holidays.

Many thanks,

Laura Berry

(734) 214-4858

berry.laura@epa.gov

From: Russ, Timothy
Sent: Thursday, December 22, 2016 10:02 AM
To: Dresser, Chris <Dresser.Chris@epa.gov>; Berry, Laura <berry.laura@epa.gov>; VanGessel, Benjamin <vangessel.benjamin@epa.gov>
Cc: Owen, Chris <Owen.Chris@epa.gov>; Bailey, Chad <bailey.chad@epa.gov>
Subject: RE: I-70 East Project - Request to FHWA for Additional Information and Preliminary Comments/Observations

Hi Everyone,

With regard to Laura's point number 1 below, we addressed this issue early on with our initial review of the Supplemental DEIS (SDEIS) air quality modeling protocol (Note: The SDEIS was issued by FHWA/CDOT in 2014). The necessary consultation took place and followed the acceptable approach as noted in Laura's information below in her email.

The FHWA/CDOT February 13, 2013 draft air quality modeling protocol is attached and I would point you to page 5, under the heading "**Season(s) to be modeled"** which notes:

"Because PM_{10} (and CO) violations have typically occurred in the winter and the maintenance plans for these pollutants address wintertime conditions, the project team proposes modeling only the winter season. This will reduce the MOVES modeling workload by a factor of four while still modeling the —worst-case season for air quality in Denver."

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Tue 3/5/2013 2:40 PM

Russ, Timothy Russ.Tim@epa.gov

RE: I-70 East: Air Quality Coordination - Draft Air Quality Analysis (Revised 2/11/13): EPA Comments

EPA has reviewed the "Protocol Air Quality I-70East DEIS 11Feb13.pdf" (copy attached) and offers the following comments for your consideration (and apologies for not meeting the March 1st requested response date):

A.) Section 3.1 Carbon Monoxide: For CO hotspot modeling, the draft protocol indicates the following at the top of page 3:

"The conformity rule requires modeling of locations that are or will be at level of service D or worse. In the case of the I-70 project, this could be dozens of intersections. Because the project team is proposing to model only the worst-case location, the EPA Regional Administrator will need to approve this approach pursuant to 40 CFR §93.123(a)(1). Similar approval was sought and received for the streamlined approach used for CO hotspot modeling for the T-Rex project."

Region 8 consulted with our Office of Transportation and Air Quality (OTAQ) and we have agreed that this approach is acceptable, as was done for the Trex project, for CO hotspot modeling for the I-70 East project. For reference, below is the FHWA-provided discussion from the Trex project and we have also provided a .pdf file of Region 8's letter of May 3, 1999 on the issue (see: "990503 EPA SE Corridor AQ Approval.pdf") – and thanks to CDOT for being able to produce this .pdf file. However, please be aware that a similar letter from Region 8's Regional Administrator, with supporting technical information for the I-70 East Project, will be necessary:

"Denver's Southeast Corridor project

This project involves the reconstruction and improvement of approximately 20 miles of I-25 and I-225 in the southeast portion of the Denver metro area. The project includes reconstruction and widening of the interstates, reconstruction of seven interchanges, replacement of 11 bridges, and construction of 19.7 miles of double-tracked light rail transit. The air quality scoping process for this project revealed that a literal application of the conformity rule's hotspot modeling requirements (analysis of all locations at or expected to be at LOS D or worse) would necessitate modeling of 54 intersections. Modeling each of these locations for the 2008 opening day and the 2020 design year, for the Preferred Alternative and No-Action, and for a.m. and p.m. peak hours would have resulted in over 400 model runs.

In order to reduce the modeling workload, the Colorado Department of Transportation and its consultants worked through the interagency consultation process to identify an alternative analysis approach that would capture the worst-case intersections without the need for modeling all of them.[32] First, the project corridor was divided into two sections; a northern section, with high volumes and congestion, and a very narrow right-of-way bordered by residential development; and a southern section, with less congestion and a wider right-of-way. In the northern section, the four most congested interchanges were selected for modeling, for both 2008 and 2020. In the southern section, a "worst-case" interchange was selected for modeling, based on congestion, roadway geometry and traffic volumes. A single worst-case model run for this location combined 2008 CO emission rates with 2020 traffic volumes. As a further refinement, it was decided that only the Preferred Alternative in the EIS would be modeled initially; if this alternative did not result in violations of the CO NAAQS, the No-Action alternative would not be modeled. EPA's Region 8 office in Denver approved this methodology in May 1999. Taken together, the refinements in this methodology are estimated to have reduced the modeling workload by 50 to 75%. No violations of the NAAQS for CO were predicted using the adopted screening procedure. *Southeast Corridor EIS Air Quality Analysis Technical Memorandum*, Carter & Burgess, June 1999."

B.) Section 4.2. PM_{10} Quantitative Hotspot Analysis: For the PM_{10} hotspot modeling, the protocol indicates the following on page 7:

"After reviewing the locations of these three monitors on aerial photographs, the project team proposes to use Commerce City as the background monitor as it best captures the industrial PM10 contributions in the project area and is a reasonable distance from the I-70 corridor (i.e., it may best reflect actual background concentrations, excluding I-70 impacts). It also may be appropriate to use a different monitor or interpolate between these and/or another monitor."

EPA would note that interpolating between monitors would require additional guidance from OTAQ and our Office of Air Quality Planning and Standards (OAQPS) and may require significant effort. Perhaps the best course would be, as noted above, to try to select a single monitor that would sufficiently represent the background concentrations for the project.

C.) Section 4.5 Mobile Source Air Toxics: On page 9 of the draft protocol, the following statement appears:

"CALPUFF is being used rather than AERMOD for the MSAT analysis because AERMOD is not supported for near-roadway applications of MSATs."

Region 8 has conferred with OTAQ and we note that this statement is not correct and does not comport with general practice among air quality modelers. AERMOD, CALINE3, CAL3QHC, and CAL3QCHR are all able to model MSAT concentrations. The modeling procedures outlined in the EPA guidance document, *Transportation Conformity Guidance for Quantitative Hot-spot Analyses in PM2.5 and PM10 Nonattainment and Maintenance Areas* are applicable to MSATs, as specified in Section 1.5 of that document. We note also that AERMOD is able to model NO_2 concentrations, as specified in Section 10 of EPA's *Near-road NO2 Monitoring Technical Assistance Document*. In conclusion, there is no technical reason why AERMOD could not be used to model MSATs or NO_2 or why CALINE3, CAL3QHC, or CAL3QHCR could not be used to model MSATs.

Also, I would note that same language for the "**Season(s) to be modeled**" appears on page 3 of the Final EIS (FEIS) air quality modeling protocol (please see the attached .pdf file).

With regard to advising FHWA of certain inaccuracies in the "Air Quality NEPA Comparison Report," I would note the following:

Page 1, section entitled "3 Changes Since the Final EIS" and page 2, first and second paragraphs which state the following:

Through Interagency Consultation, it was confirmed that some of the content of the Final EIS need not be revised based on the updates noted above. Items not updated in this document include the emissions inventory of health-based National Ambient Air Quality Standards (NAAQS), mobile source air toxics (MSATs), and greenhouse gases (GHGs). In the Final EIS, the project examined regional emissions of these pollutants on a broad scale and followed FHWA guidance in *Interim Guidance Update on Mobile Source Air* 5 *Toxic Analysis in NEPA (December 6, 2012).*

The Final EIS included an emissions inventory of atmospheric carbon dioxide for all alternatives discussed. Though there is new GHG guidance, Interagency Consultation with FHWA, EPA, and APCD confirmed that it is not necessary to repeat this analysis because of the following reasons:

- Changes to the project design are minimal, so changes to results of analysis at the air quality study area level—which includes the entire project, as well as the surrounding local road network—would not be noticeable

- The regional air quality inventory analysis is primarily a trend-line comparison between project alternatives. The Final EIS adequately discusses these trends for the use of a NEPA comparison 14 and updates to the analysis for the ROD would not alter previously shown regional air quality trends

- The new GHG guidance states that projects that have published a Final EIS are not required to update their analysis

[Suggested Comment:]

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Once we have agreed on the content/form of the above requests and comment, I would then suggest that we send the requests/comment out from Region 8 (Tim volunteers) with "cc" to other EPA personnel.

Thoughts?

Thanks!

Tim

Tim Russ
Environmental Scientist
USEPA Region 8
Air Program
1595 Wynkoop Street (8P-AR)
Denver, CO 80202-1129
Ph. (303) 312-6479
Fax (303) 312-6064
e-mail: russ.tim@epa.gov

From: Dresser, Chris
Sent: Wednesday, December 21, 2016 1:57 PM
To: Berry, Laura <berry.laura@epa.gov>; Russ, Timothy <Russ.Tim@epa.gov>; VanGessel, Benjamin <vangessel.benjamin@epa.gov>
Cc: Owen, Chris <Owen.Chris@epa.gov>; Bailey, Chad <bailey.chad@epa.gov>
Subject: RE: CO Moves files for EPA review

Ex. 5 - Deliberative Process

not?"

Chris Dresser

U.S. EPA – Region 8

1595 Wynkoop Street

Denver, Colorado 80202-1129

Phone: (303) 312-6385

From: Berry, Laura
Sent: Wednesday, December 21, 2016 1:53 PM
To: Russ, Timothy <Russ.Tim@epa.gov>; Dresser, Chris <Dresser.Chris@epa.gov>; VanGessel, Benjamin <vangessel.benjamin@epa.gov>
Cc: Owen, Chris <Owen.Chris@epa.gov>; Bailey, Chad <bailey.chad@epa.gov>
Subject: FW: CO Moves files for EPA review

Hi all,

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3. A decoder for which alternatives go with which AERMOD input/output file names

What else? Feel free to reply to all. Tomorrow I can write it up, or R8 can, and we can figure

out who should send it… R8 can send w/ a cc to HQ, or we can send, whatever R8 prefers.

Laura Berry

(734) 214-4858

berry.laura@epa.gov

From: Dresser, Chris
Sent: Monday, December 19, 2016 10:30 AM
To: Horn, Chris (FHWA) <Chris.Horn@dot.gov>
Cc: Vanessa Henderson - CDOT <vanessa.henderson@state.co.us>; Wallis, Carrie (Carrie.Wallis@atkinsglobal.com) <Carrie.Wallis@atkinsglobal.com>; Houk, Jeff (FHWA) <Jeff.Houk@dot.gov>; Claggett, Michael (FHWA) <Michael.Claggett@dot.gov>; Perritt, Karen (FHWA) <Karen.Perritt@dot.gov>; Berry, Laura <berry.laura@epa.gov>; Russ, Timothy <Russ.Tim@epa.gov>
Subject: RE: CO Moves files for EPA review

Chris and Mike,

Could you also provide the scripts and/or intermediate tables that calculate the volume source emission rates from the MOVES output? It is important for us to understand how the cross-walk between MOVES links and AERMOD sources was performed.

Thanks,

-Chris

Chris Dresser

U.S. EPA – Region 8

1595 Wynkoop Street

Denver, Colorado 80202-1129

Phone: (303) 312-6385

From: Horn, Chris (FHWA) [mailto:Chris.Horn@dot.gov]

Sent: Sunday, December 18, 2016 8:51 AM
To: Dresser, Chris <Dresser.Chris@epa.gov>; Russ, Timothy <Russ.Tim@epa.gov>
Cc: Vanessa Henderson - CDOT <vanessa.henderson@state.co.us>; Wallis, Carrie (Carrie.Wallis@atkinsglobal.com) <Carrie.Wallis@atkinsglobal.com>; Houk, Jeff (FHWA) <Jeff.Houk@dot.gov>; Claggett, Michael (FHWA) <Michael.Claggett@dot.gov>; Perritt, Karen (FHWA) <Karen.Perritt@dot.gov>
Subject: RE: CO Moves files for EPA review

Tim and Chris,

Referred to FHWA

Chris Horn, PE

Senior Area Engineer

Colorado Division

Federal Highway Administration

720-963-3017

From: Horn, Chris (FHWA)
Sent: Wednesday, November 23, 2016 8:41 AM
To: 'dresser.chris@epa.gov'; 'russ.tim@epa.gov'
Cc: 'Vanessa Henderson - CDOT'; Wallis, Carrie (Carrie.Wallis@atkinsglobal.com); Houk, Jeff (FHWA); Claggett, Michael (FHWA); Perritt, Karen (FHWA)
Subject: RE: CO Moves files for EPA review

Tim and Chris,

Referred to FHWA

Chris Horn, PE

Senior Area Engineer

Colorado Division

Federal Highway Administration

720-963-3017

From: Horn, Chris (FHWA)
Sent: Friday, November 18, 2016 10:47 AM
To: 'dresser.chris@epa.gov'; 'russ.tim@epa.gov'
Cc: 'Vanessa Henderson - CDOT'; Wallis, Carrie (Carrie.Wallis@atkinsglobal.com); Houk, Jeff (FHWA); Claggett, Michael (FHWA)
Subject: CO Moves files for EPA review

Chris and Tim,

Referred to FHWA

Chris Horn, PE

Senior Area Engineer

Colorado Division

Federal Highway Administration

720-963-3017