DRAFT 2/23/17

Discussion Summary

Federal/State Technical Work Collaboration Group Conference Call, February 2, 2017

Agenda Item 5) Discuss list of technical questions for 2015 Ozone transport NODA

The following technical questions were compiled by the MJO Modeling Files Workgroup, with input from others, for purposes of discussion during the February 2, 2017, Federal/State Technical Work Collaboration Group call.

*Norm Posseil (OAQPS) suggested the group walk through the questions with an understanding EPA may need to prepare a more formal response to some.*

1. Does EPA consider the CSAPR NODA for the 2015 Ozone NAAQS *a partial remedy* of states good neighbor requirements? If so, what analysis is needed for states *to fully comply* with their good neighbor requirement?
2. A related question is about avoiding potential over controlling and whether each upwind state identified as a significant contributor (1% threshold) for the same downwind monitor has to reduce is contribution down to 0.7 ppb or whether, collectively, the upwind states need to get down to 0.7 ppb impact?
* *CAMD – both 1 and 2 are trying to get at what is the remedy for 2015 ozone? The NODA is not informative to the remedy itself, but EPA would be interested in future conversation regarding what sort of data analysis could help inform the answer to the question. How EPA determines a full or partial remedy is through Step 3 of the CSAPR framework – it’s not just looking at the upwind state’s contribution, but also NOx reduction potential, cost, and downwind impact. Which means, it’s not just tons reduction. These types of factors are in addition to what moves a state’s contribution down to 0.7 ppb. Identifying the Ozone transport problem that exists was the intent of the NODA. Comments on this aspect are useful.*
* *OTC – The NODA assumes a lot of controls, like the CSAPR update (2008 Ozone) and CPP. When determining contribution, if those controls are not in place, a state would need to come up with equivalent reductions? With the uncertainties it seems to make sense to use the baseline to determine contributions rather than make predictions that may or may not be in place in 2018. MARAMA – to expand on that point, how specific is the run to what is expected in the future? CAMD – to the point of whether or not future actions are committed and enforceable measures. MARAMA – they are not, as power plants are about production, not control measures.*
* *MARAMA - if a state relies on EPA’s NODA modeling for its transport SIP in 2018, would EPA expect all the reductions predicted to be enforceable? CAMD – the transport SIP process would include that review and the public would be able to weigh in. North Carolina – that’s the crux of the matter – if the analysis shows a state is not linked to a monitor and the state relies on that, they’re saying emissions reductions are part of the analysis. If the state doesn’t say that, the SIP is ripe for challenge. Clarification is needed. CAMD – sounds like something to discuss further with the Group.*
* *SESARM – one issue is timeliness, as this fall agencies need data in hand to start the SIP process. It may be possible states know from a practical standpoint what to do, but don’t have the economical information that IPM does – the dilemma is not knowing the ramifications of national power generation planning and whether can assume IPM is correct or the state will need to make changes because reality is different. OAQPS - remember what NODA was – not an absolute, but preliminary modeling to give states an opportunity to do their own modeling if they want to. A state could remodel with data they have and defend that in their SIP. The NODA wasn’t intended to turn around and plug into a SIP. If a state didn’t think CPP could be defended, it may want to remove it.*
* *West Virginia – when EPA says the CPP is included, can you specify the conditions of how CPP was used in the model? CAMD – details are in the incremental modeling portion of the implementation document in the docket; used mass-based with no trading between states.*
1. It is our understanding that the 2015 Ozone NAAQS NODA was developed using comments received on the 2008 Ozone NAAQS NODA. It appears there are some comments not addressed, specifically, related to model performance (ex: 3 x 3 km vs. 1 x 1 km). Will the modeling performance workgroup being formed under the Collaboration Group umbrella be addressing relevant 2008 Ozone NAAQS NODA comments?
2. Were there non-modeling performance comments for the 2008 Ozone rule that were not addressed in the 2015 Ozone NODA? Is there a list or response to comments from the 2008 Ozone NAAQS NODA that states could use a reference when reviewing the 2015 Ozone NAAQS NODA*?*
* *OAQPS – both 3 and 4 ask about comments from the 2008 Ozone proposed NODA. All questions on the 2008 Ozone update were addressed in the final rule and EPA’s responsse are documented in the preamble and response to comment (Norm will send the link to Theresa for distribution). The 2015 NODA reflected comments received and incorporated into 2008 NODA and supplemented by additional information, specifically from MARAMA. EPA thought long and hard about the approach for 2015 Ozone and looked at detailed information on modeled predictions on particular days for different sites. The modeling guidance was followed with the understanding that there might be discussions about deviations from EPA’s approach. EPA will entertain discussions about model performance and methodologies related to linkages. Looking at the CSAPR update (2008 Ozone) versus 2015 NODA, EPA’s focus for 2008 was individual sites was receptors in the East. The TSD for the 2015 NAAQS NODA has expanded model evaluation for receptors outside the East. Part of the information on the platform data drives will include observed and predicted values for all sites for all days in the summary nationwide. In addition, in the docket, EPA has a data file with model performance statistics for each monitoring site – not just nonattainment or maintenance sites. EPA intent is to prepare draft materials that talk about model performance considerations in a general/tiered sense and share with interested states. Guidance EPA might provide could be about how states consider model performance and contribution data and will work to develop a framework for future discussions.*
* *AR – we’re talking about linkages at level of .7 ppb, which is below the level a monitor can detect – how can states rely on modeling assumptions that can’t be supported in the real world? OAQPS - good question and gets to the confidence level of modeling to reflect 1% of the NAAQS. Suggest EPA can prepare specific details for further discussion.*
* *WESTAR/WRAP - adding on to AR’s question, outside of CSAPR, what does 1% actually mean? The modeling performance for the 2008 NODA was not limited to the CSAPR update; it’s not clear how the model performance process was changed from the 2008 work? OAQPS – for the CSAPR update the focus for modeling performance was for individual sites in the east; for 2015, it included evaluation for the west and includes observed and predicted values the states can use. In the docket there is a data file with modeling performance statistics for each monitor in the U.S. The intent is to prepare draft materials about model performance and share with interested states and MJOs, then discuss together. GA – a number of states submitted comments on modeling performance for the CSAPR update. Will those be included in future discussions or are they in the 2015 NODA? OAQPS –the non-modeling performance comments were addressed.*
* *MARAMA – MARAMA looks at east of the Mississippi River as the background conditions, which right now shows a very large impact in the East. The global model we’re using has old data (from 2005), so, improvements on global EIs would be helpful. OAQPS – there is stream of issues that fall out of that, so, will flag for subsequent conversations. Two immediate aspects – it’s important to use available data and there is an appropriateness question of using global scale modeling to determine background contributions for half of the U.S. EPA would encourage MJOs to work together to come up with national scale background conditions.*
1. The CSAPR framework treats a contribution from an individual state at or above 1% of the NAAQS as significant. There may be situations where the modeling may not be confidently predicting 1 ppb or more of ozone being transported because of distance, terrain, etc. What type(s) of technical demonstration(s) would be acceptable for a reconsideration of a state’s contribution?
* *OAQPS – we heard this early in this process from UT and AR –the question is duly noted and will be included in future discussions. GA – would like to add that EPA’s guidance on SILs for ozone and PM2.5 said 1 ppb for PM2.5 precursor was significant, so why not use that level for interstate transport? OAQPS – that is a valid question and we’ll construct a response to share.*
* *WESTAR/WRAP – there were earlier comments about the preliminary nature of using 1%, but it’s not clear what a 1% target means from a state’s obligation. OAQPS – for previous rules if an upwind state contributed to a nonattainment site in another state that upwind state used 1% for consideration of controls, looking at the NOx reduction potential, cost of controls, timing and downwind impact. 1% was a screening threshold that meant moving to the next phase of the process. The parts per billion impacts from an upwind state are not the state’s contribution, but only the threshold to determine if the state needs to go to the next phase of analysis. One thing to keep in mind is the approach produces average contribution so there will be days with much higher contribution and some with much less contribution. So, if look at only exceedance days, the contribution may likely be higher.*
1. As for the 2008 Ozone NAAQS NODA, there are concerns that the IPM modeling inputs for the 2015 Ozone NAAQS are not reflective of current and expected actions by the EGUs. Below is one example:

The state of Oklahoma is concerned that EPA’s attempt to model our EGU ozone season emissions are failing to capture the resulting NOx reductions that have occurred in the state since the development of the 2011 NEI. A quick analysis of the Acid Rain database (the CSAPR database could not be used because it only works for 2015 to present) comparing 2011 to 2016 ozone season data for the state of Oklahoma shows:

* Heat input reduced 27%
* Gross load reduced 23%
* NOx tons reduced 68%

Is the IPM model capturing these reductions? Would it be helpful for the EPA/ERTAC workgroup to do a comparison similar to the one they did for the final 2008 Ozone CSAPR rule?

* *CAMD - will take a look at OK’s question and follow up with the State. Agree the ERTAC/EPA group may be a good place to discuss similar questions and issues. CAMD did compare 2011 and 2016 data in NEEDS, so, not everything is 2011. MARAMA – GA did do an ERTAC/IPM comparison and can share.*
1. An Ozone Air Quality Assessment Tool (AQAT) was developed for both the original CSAPR Rule and for the CSAPR Update Rule (2008 Ozone NAAQS). The Ozone AQAT was used to estimate downwind changes in Ozone concentration associated with upwind changes in NOx emission levels. Is it acceptable for states to use the Ozone AQAT (developed for the CSAPR Update Rule) to estimate the downwind effects of NOx reductions in support of an Ozone infrastructure SIP that would be prepared for the 2015 ozone NAAQS?
* *CAMD – AQAT was specifically made to evaluate emission changes in the eastern U.S. in 2017, so would not be appropriate for the 2023 timeframe. It may be possible to create a new AQAT that is around 2023 that could provide some insight, but defer whether that would be approvable for a SIP. How/if AQAT can be used to develop appropriate downwind remedies may be worthwhile conversation to have. The group can have discussions about that and other tools that may help with the 2023 evaluation.*
* *ERTAC/EPA group – convening discussions with regional EPA offices in the next month but related more solely to EGU projections. That group will not be working as much in the near-term on other sectors.*

GENERAL THOUGHTS

* SESARM - *what types of communications is OAQPS having with the regional offices about creating expectations/paths for the transport SIPs? If a state moves forward with the NODA data as basis for their SIP, what will the regional office reaction be? OAQPS – that is a good question and the office does need engage them more, including inviting to these calls. Chet will work with Anna Wood to schedule a call similar to this one with the regions to make sure regions are on same page and not leave states in vulnerable positions because of what’s included in the base (ex: CPP). LADCO – ERTAC identified working better with the regional offices as one of the four goals (June 2016 meeting) and why the ERTAC/EPA group plans to pull regions into their conversations. Mark Janssen will touch base with Michael Ling regarding who may be the best ERTAC/IPM point in each region.*
* CAMD – *during the last ERTAC/EPA group call, EPA pointed the group to the latest guidance and suggested ERTAC share to get feedback –the goal is to have a more technical understanding.*
* WESTAR/WRAP *– is there a way to outline the information that will be communicated to the regions? OAQPS – there has been participation from Anna’s Division on this group and are the ones that coordinate with the regions. MARAMA – it will be important to work with the regional offices because states may want to use different EGU projections and will need to know what documentation the regions will accept*.