**REGIONAL HAZE PLANNING WORK GROUP**

**CONTROL MEASURES SUBCOMMITTEE**

**NOTES OF CONFERENCE CALL**

**Monday, November 26, 2018**

Notes by Ed Merta, City of Albuquerque

**Attendance**:

Tim Allen (FWS), Pat Brewer (NPS), Ranil Dhammapala (WA), Frank Forsgren (NV), Philip Genting, Craig Henrikson (MT), Gary Huitsing (WA), Kirsten King (NPS), Ed Merta (Abq), Tom Moore (WRAP), Jeremy Neustifter (CO), Curt Taipale (CO), Elias Toon (AZ)

**Action items that resulted from the call**:

* Curt will schedule a Control Measures subcommittee for the week of December 17.
* Gary will email to the group a RACT analysis that is relevant to consideration of visibility impacts of particular sources.
* States should email Curt as soon as possible the number of emission points for which they would be interested in seeing source specific source apportionment modeling. States should already have this information available as part of their initial Q/d identification of sources for the screening process described in the draft Protocol. Tallying the total number will help Curt and Tom get a better sense of the resources needed for possible modeling – both in terms of what modeling options should be used and how involved the modeling would be.
* Tom will email to state contacts a list of the small number of coal fired EGUs that were not subject to BART during the first planning period and thus might be candidates for further control measures.

**Other decisions**:

* Curt stated that he would move discussion of visibility impacts of particular sources, including use of source apportionment data, to the portion of the draft Protocol addressing visibility as an additional fifth factor in the control measures analysis.
* The group decided to defer discussion of changes in the content of the “fifth factor” portion of the protocol until after the December 12 WRAP webinar on options for modeling visibility impacts of particular sources. Curt will move content related to source-specific visibility impacts from earlier pages into the “fifth factor” portion of the Protocol, but Curt will not change any of the content in that portion until the subcommittee meets following the webinar on modeling options.

**DISCUSSION OF AGENDA ITEMS**

**1. Request note taker volunteer**

Ed Merta volunteered.

**2. Review of the latest changes to the RP Protocol Document**

Curt described his process in revising the draft. He accepted edits (in MS Word track changes) that the group talked about on previous calls. Then he made further changes based on discussions during the October call. These changes are visible in MS Word tracked changes in the draft distributed for the current (November) call.

Since he did those changes, Curt received an email from Arizona with additional comments, which Curt proposed to discuss later in this call.

The group proceeded to discuss the proposed changes on each page.

*Pages 1, 2, 3*. These were only minor editorial changes. The group had no comment.

*Page 6*. Curt stated that this proposed language responded to Federal Land Manager (FLM) comments on what goals Regional Haze planning is trying to achieve with the source screening analysis. The language is intended to be “somewhat faithful” to the 2016 draft EPA guidance, by analyzing sources that represent as big a fraction as possible of visibility impacts due to emissions at Class 1 Areas (C1As). The language here is meant to capture FLM thoughts previously expressed in this regard.

The group had no comments on this language.

*Pages 8-9*. Curt stated that Frank Forsgren of Nevada contributed the language here, to best reflect comments Frank had made on previous calls. The language addresses options for source apportionment modeling, discussing how such modeling could help with analysis of sources beyond point sources, such as area sources (and other sources mentioned in the draft). Such additional inquiry could help later, after WRAP performed source apportionment modeling.

The second paragraph of this new material further outlines how source apportionment modeling could supplement the three step screening process discussed elsewhere in the draft. As discussed in the current draft, this supplemented process would get down to identifying sources while also identifying controllability of these sources. You might have a source category you want to look at that might not be very controllable.

Frank explained that this proposed language reflected input from a number of states that have indicated the importance of bringing visibility into the control measures process. He emphasized that this specific language is “a first cut” and he’s open to comments.

Curt noted that the document covers visibility in subsequent pages as well but it might be good to mention it here also.

The group moved on to discuss how data from 2028 modeling might be used in the process of control measures analysis. Points made in this discussion included the following.

* The makeup of source sectors might change significantly from the 2014 base case to the 2028 projections. Examples include mobile sources, electric generating units (EGUs), non-EGU point sources, and oil and gas. Mobile source emissions might reasonably be expected to go up over time, while EGU emissions might go down (many coal fired EGUs will be closing, for example).
* In view of the above, source apportionment modeling for 2028 might provide a more realistic picture of visibility impacts for purposes of screening sources.
* The control measures subcommittee needs to think about how changes in the makeup of source sectors over time will affect analysis of control measures to be included in the SIP.
* If the subcommittee decides that 2028 source apportionment data should be looked at as part of the control measures analysis, does this create the need for an additional step in the three-step process laid out in the draft Protocol? In other words, are we creating a four-step process rather than three step? The use of 2028 data would seem to entail a process sufficiently different in kind from the three existing steps to justify creating a fourth step. Or, instead do we regard use of the 2028 data as merely a refinement of a process that remains a three step process?
* When will 2028 data (to include emissions projections and Particulate Matter Source Apportionment Technology (PSAT) results) become available?
* As we wait for 2028 data to become available, we need to keep in mind that it will take a while to get information on the cost of potential controls, which will involve communicating with regulated sources. Gathering such cost information could take six months to a year. The information will be highly site-specific (with possible exceptions for area sources); we don’t want to wait for 2028 data before starting the process of getting specific control cost information from sources. The availability of source apportionment modeling could affect how we communicate with regulated sources in gathering the control cost information. The timing of when the source apportionment modeling data is available needs to be factored into how and whether that data becomes part of a fourth step added on to the three step screening process presented in the current draft Protocol. Any language on a fourth step will have to address the fact that the step would need to be delayed until 2028 data is available.
* Pat stated that she could forward materials that would be helpful in supplementing, refining or extending the three-step process, without having to wait for PSAT or other results.

Discussion of the 2028 data evolved into a distinct but related discussion on analyzing visibility as a fifth factor on top of the four factor analysis that will determine reasonable control measures. The discussion to this point in the call focused on the three-step process in the current draft Protocol for visibility impact screening prior to four-factor analysis. Participants on the call noted that screening sources for visibility impact is different than using visibility impact as a fifth factor added on to the later, distinctive procedure for four-factor analysis of control measures.

Points made in the discussion of visibility as a fifth factor included the following.

* How do we address visibility in the process of screening sources, as opposed to addressing it as a fifth factor in the analysis of control measures later? Do we have to do both?
* Would it be better to consider 2028 modeling data later, as part of a fifth factor added to four factor analysis – rather than using that data in the screening of sources provide for in the current Protocol’s three step, Q/d + WEP procedure? This would give us more time for modeling data to become available. If we take this approach, it might be best to defer substantial discussion of visibility impacts until later in the draft protocol, as part of the discussion on visibility as an additional factor added on to the four factor analysis.
* One of the purposes of the screening process is to get down to a manageable number of sources to be subjected to four-factor analysis. Screening isn’t really about defining a threshold visibility impact for particular sources. The time to consider that threshold for visibility is probably later, during the four factor analysis, when visibility impact as a fifth factor might be the deciding factor in applying controls for a particular source.
* In view of the points above, it might be best to defer discussion of source apportionment modeling until later in the draft Protocol, putting that discussion in the section addressing the role of visibility in a four-factor analysis (or four plus one).

**DECISION**. Finding general consensus on the above points, Curt stated that he would move discussion of visibility impacts of particular sources, including use of source apportionment data, to the portion of the draft Protocol addressing visibility as an additional fifth factor in the control measures analysis.

*Page 10*. Discussion moved to language prepared by Curt in advance of today’s call, addressing use of visibility as a fifth factor in the four-factor control measures analysis. Curt’s language describes different options, subject to consideration by WRAP, for conducting source-specific analysis of the visibility impacts of control measures. In view of the cost that would be involved to obtain the requisite modeling, Curt urged the group to come to a consensus on the language he composed for this portion of the Protocol. He invited comments from the group.

* Is it really the case that we can’t make use of the CALPUFF model? States have experience using it and EPA doesn’t appear to be opposed to using it in this round of Regional Haze planning.
* CALPUFF uses a single term to represent background concentrations, rather than incorporating particular sources into the treatment of background. It is expensive to do photochemical modeling. The code used to run CALPUFF would need to be updated and that would be a challenging task. CALPUFF was used in the first planning period when the visibility metric was different (worst days rather than most impaired days); could this affect use of the model?
* Additional research would be necessary to get background data adequate for use of SCICHEM. The state of Washington has such data available for its own jurisdiction and surrounding states, via past use of the AIRPACT modeling system.
* Will WRAP be dong a single, gigantic run of visibility impacts modeling for particular sources or will individual states do it themselves? This is a fundamental question.
* WRAP will be presenting a webinar on December 12 on various options for modeling visibility impacts of particular sources. It might be better to defer final decisions on content for this portion of the Protocol until after that webinar.

**DECISION**. In light of the above discussion, the group decided to defer discussion of changes in the content of the “fifth factor” portion of the protocol until after the December 12 WRAP webinar on modeling options for analyzing visibility impacts of particular sources. Curt will move content related to source-specific visibility impacts from earlier pages into the “fifth factor” portion of the Protocol, but Curt will not change any of the content in that portion until the subcommittee meets following the webinar.

**ACTION ITEM**: Curt will schedule a Control Measures subcommittee for the week of December 17.

**ACTION ITEM**:Gary will email to the group a RACT analysis that is relevant to these issues.

*Further discussion: visibility impacts*. Members of the group emphasized the need for a regionally endorsed or regionally consistent approach to control measures analysis and the role of source specific visibility impacts in that analysis. Subsequent discussion noted that WRAP would eventually release, through the process laid down in its Work Plan, a final version of the Protocol that the Control Measures subcommittee is now developing. Although WRAP will distribute this document to stakeholders, individual states are still free to make their own decisions about whether and how to implement the Protocol’s approach, modify it, or use some other methodology.

There was inconclusive discussion of possibly performing a Decoupled Direct Method (DDM) sensitivity analysis via CAMx or CMAQ to identify visibility impacts of sources. This discussion noted the possibility that picking one modeling approach will always leave additional, more sophisticated options that were not used. Staff and resource constraints will play a role in such decisions.

**3. Group discussion of any further changes/discussion/missed items**

See above notes.

**4. Next Steps**

**ACTION ITEM**: states should email Curt as soon as possible the number of emission points for which they would be interested in seeing source specific source apportionment modeling. States should already have this information available as part of their initial Q/d identification of sources for the screening process described in the draft Protocol. Tallying the total number will help Curt and Tom get a better sense of the resources needed for possible modeling – both in terms of what modeling options should be used and how involved the modeling would be.

**ACTION ITEM**: Tom will email to state contacts a list of the small number of coal fired EGUs that were not subject to BART during the first planning period and thus might be candidates for further control measures.

**5. Next Call December 26th 10-11 am (do we want to cancel/reschedule?)**

**(poll folks to see who is around -I will be out)**

See discussion above. Curt to schedule next meeting for week of December 17.