**CONTROL MEASURES SUBCOMMITTEE**

**NOTES OF CONFERENCE CALL**

**Wednesday, January 23, 2019**

Notes by Ed Merta, City of Albuquerque

**Attendance**:

Attendance: Frank Forsgren (NV), Philip Gent (WA), Rebecca Harbage (MT), Craig Henrikson (MT), Aislinn Johns (ID), Rob Leteff (WY), Ed Merta (Abq), Tom Moore (WRAP), Tina Suarez-Murias (CA), Curt Taipale (CO).

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

* In regard to distributing a draft Protocol to a wider WRAP audience, the subcommittee agreed to the following.
	+ Once the subcommittee reaches consensus on the final edits agreed to on today’s call, Curt will work with Jay and Tina to distribute the Protocol to the Regional Haze Planning Workgroup (especially the Consultation and Coordination subcommittee) and the Oil and Gas Workgroup.
	+ The draft will be distributed in both a “clean” version (all changes accepted in MS Word) and an “edits still visible” version (changes still visible from version that Curt emailed to Control Measures Subcommittee on January 16, 2019, as modified by further edits discussed in January 23, 2019 subcommittee call).
	+ The distribution of the “edits still visible” version will allow for comments by Federal Land Managers (FLMs) once they return to work and are again available to participate in WRAP Regional Haze planning.
	+ Distribution of a “clean” version will reflect the subcommittee’s aspiration that the draft Protocol is nearing finalization.
* Curt offered to send Aislinn examples of four factor analyses for source categories that Colorado did in the first Regional Haze Planning period. Aislinn said she’d be very happy to get those.

**DISCUSSION OF AGENDA ITEMS**

**1. Request a volunteer to take notes.**

Ed Merta of Albuquerque volunteered.

**2. Review of meeting notes from last call on Dec. 18th.**

The group had no suggested edits.

**3. Review latest edits to RP Protocol Document**

Curt led the group through a page by page review of the document Curt emailed to the subcommittee on January 16, 2019. For this document, Curt accepted [i.e. incorporated into the documents cleanly, not marked up in MS Word track changes) any edits proposed through November 14, 2018 on which he had received no comments.

Notes on the group’s review of each page are as follows.

*Page 2*

National Park Service suggested language indicating that the 80% threshold for emission impacts evaluated by states is associated with each individual Class 1 Area (C1A), not with a larger universe, such as a grouping of C1As.

The group had no comment. Curt will incorporate this change.

*Page 3*

Substantive edits appearing on this page come from Ralph Morris of Ramboll, regarding SO2 & H2SO4. Curt’s understanding is that Arizona may have some suggested edits here but they are not on today’s call. On this call the group had no comment.

*Page 5*

Updates to recommended Q/d process.

The group had no comment. Curt will incorporate these changes.

*Page 6*

Edits focus on FLAG guidelines, clarifying that although they’re intended for use in regard to Prevention of Significant Deterioration programs, the Protocol uses them for Q/d because doing so offers a simple and quick approach to identify potential visibility impacts.

The group had no comment. Curt will incorporate these changes.

*Page 8*

The edits here emphasize that WRAP encourages states to contact sources early in their planning process, even with WEP analysis not available until later in the spring of 2019. This content also clarifies that despite the limitations of WEP it will have value later to help confirm Q/d calculations, especially in regard to capturing a large fraction of the visibility impact at C1As. WEP will make sure that a state’s analysis is looking at sources that actually do have such an impact.

The group had no comment. Curt will incorporate these changes.

*Page 9*

Certain content related to visibility moved from this page to Section 5, page 11 – see notes below.

*Page 10*

Extensive edits to discussion of considering visibility as a “fifth factor” in four factor analysis of control measures necessary to make reasonable progress. Curt stated that his proposed edits try to strike a delicate balance, between recognizing (A) concerns among FLMs about the use of visibility as a fifth factor and (B) discretion available to states to adopt such an approach. The subcommittee operates by consensus, and Curt’s edits try to build that consensus by striking a balance and stating that the subcommittee is not making a recommendation.

Frank stated that he thought the edits did a good job striking the balance that Curt described.

There were no other comments from the group, but Curt encouraged anyone to call or email him after today’s call to express their thoughts on this topic.

*Page 11*

Content on visibility as a fifth factor has been inserted here after being moved from page 9.

Curt identified a typo that his edits had not corrected.

Phil noted that some of the content now on page 11 still refers to material in Section 4, saying the material is “above,” but this language is confusing because the material actually appears much earlier than was the case before the edit. Curt said he’ll change the page 11 content to more clearly indicate where the earlier material now occurs.

The group had no other comments. Curt will incorporate these changes.

*Pages 12-13*

The edits delete a considerable amount of content related to the SCICHEM model. Because fifth factor visibility modeling will be left for states to perform if they choose, this proposed draft removes specifics regarding SCICHEM as a potential approach to fifth factor modeling.

The group had no comment. Curt will incorporate these changes.

*Pages14 &15*

Correction to numbering of paragraphs.

The group had no comment. Curt will incorporate these changes.

*Distribution of revised draft*

Curt will implement changes consistent with discussion on today’s call.

**ACTION ITEM**: After some discussion, the group agreed to the following.

* Once the subcommittee reaches consensus on the final edits agreed to on today’s call, Curt will work with Jay and Tina to distribute the Protocol to the Regional Haze Planning Workgroup (especially the Consultation and Coordination subcommittee) and the Oil and Gas Workgroup.
* The draft will be distributed in both a “clean” version (all changes accepted in MS Word) and an “edits still visible” version (changes still visible from version that Curt emailed to Control Measures Subcommittee on January 16, 2019, as modified by further edits discussed in January 23, 2019 subcommittee call).
* The distribution of the “edits still visible” version will allow for comments by Federal Land Managers (FLMs) once they return to work and are again available to participate in WRAP Regional Haze planning.
* Distribution of a “clean” version will reflect the subcommittee’s aspiration that the draft Protocol is nearing finalization.

*Availability of WEP analysis*

Craig asked for an update on when the results of WEP modeling might be available.

Tom stated that completion of the modeling will depend on availability of a projected 2028 emissions inventory reflecting rules on the books. That projected inventory will serve as input for the WEP modeling and producing the inventory will take a lot of work. Tom did not have an update on when the 2028 projected emissions will be done. Obtaining them will require agreement between states and the affected source categories. For example, a workshop on EGU emission projections is scheduled for March 12, 2019, with the goal of obtaining consensus of both states and electric utilities on EGU projections. The 2028 meteorology has been completed, Tom noted.

Craig asked how long the actual WEP modeling will take once it’s started.

Tom stated that doing the WEP modeling will not be “an intense effort,” since it will involve no atmospheric chemistry and, no complex manipulation of meteorology data. The WEP modeling will take maybe a month or two to get a fairly complete draft of the WEP maps. These maps will allow a planner to select a C1A and get its corresponding WEP graphics.

*Fugitive emissions*

Curt said that one state has asked him about fugitive emissions. The Protocol, he commented, doesn’t get into this topic because each state might handle such emissions a little differently as part of its emissions inventory. For example, Colorado’s 2014 National Emissions Inventory generally includes actual emissions, which may account for fugitive emissions. Other states may take a different approach.

FLMs have said they would like for Regional Haze planning to include an assessment of possible control measures for fugitive emissions, such as those from road dust and blasting at mines. Such controls may turn out not to be feasible, Curt stated, but FLMs have said they’d like WRAP to at least look at such controls. States should keep this in mind, especially regarding sources unique to your state. Curt asked whether anyone thought the subcommittee should consider addressing this topic more in the Protocol?

There was some subsequent discussion of what pollutants should be considered when addressing fugitive emissions – Curt said he had in mind mostly particulate matter.

He noted the difficulty of obtaining reliable estimates of actual fugitive emissions, which may differ from what appears in AP-42 estimates. For example, a permit might require spraying water to contain fugitive dust, but beyond a certain wind speed no one really knows what the actual emissions of dust are.

Curt ended by reiterating that states should at least be aware of fugitive emissions as a factor to be considered in factor analyses, even if the practical reality ends up being that no realistic control measures are available in the end.

**4. Any follow-up discussion on Ramboll Q/D call held on 1/10?**

Curt asked if the group had any further comments on the January 10 call that discussed the WRAP contract with Ramboll for Q/d data and consideration of existing control measures at reasonable progress sources.

*Providing state Q/d data to Ramboll*

There was an extended discussion of whether states should send their own Q/d calculations to Ramboll as part of that contractor’s work. Points made in the discussion included the following.

* If states that have done Q/d work send the results of that work to Ramboll, such action might avoid paying for duplicative work.
* States who have done their own work on Q/d related information might be able to benefit Ramboll’s work by sending their information to Ramboll. For example, if states have GIS shape files available, proactively sending them to Ramboll might avoid the need for extra work later on reconciling Ramboll’s internal files with that available to states.
* Having Ramboll contact numerous states, rather than relying on already available data, may create more work and expense for Ramboll.
* State Q/d work might be in different formats and use different methods, whereas a single project based on a single data set produced by Ramboll will assure a cleaner, more efficient, regionally consistent approach.
* WRAP can’t compel states to send data to Ramboll.

The discussion of these points did not reach a conclusion. Further discussion was tabled for future occasions.

*Addressing area sources in Ramboll Q/d work*

Aislinn asked whether Ramboll will be providing states with the GIS shape files it used in its calculations. She said this would help her agency in trying to address area sources in its reasonable progress planning.

Points made in the subsequent discussion included the following.

* Ramboll can provide its GIS shape files to WRAP.
* Analyzing area sources in a reasonable progress assessment poses major methodological challenges.
* To illustrate the challenges, Curt cited the example of certain equipment used on oil & gas wells in Colorado, which are small but can constitute a significant area source.
	+ The wells use a “separator” to segregate liquids extracted from the ground – water, oil, gas
	+ To prevent these liquids from freezing in winter, a heater fires gas off the well, creating NOx emissions
	+ NOx emissions from individually small wells can be significant over a wide area; for example, a single county might contain hundreds or thousands of wells.
	+ How do you pick the centroid of this area source for a Q over d calculation?
	+ Is the centroid the center of the county when you’re calculating distance to a C1A?
	+ Would it be more beneficial to consider emissions in this category over the entire state?
	+ What kind of controls do you look at in a four factor analysis for an individual source that may have emissions of less than one ton per year? One source in this category might differ substantially from another – if there are thousands of wells in an area, they will not all consist of identical or similar technology, and thus you can’t assume that any particular control measure will be applicable to a particular number of them.
	+ EPA has not provided guidance on these types of questions.
	+ Colorado has not developed workable answers to these questions.
	+ Tom added that it’s very difficult to obtain actual emissions from an area source like this, and thus you have to rely on engineering estimates, which can be less preferable

There was some sentiment on the call that the subcommittee may wish to continue discussion of area sources in future calls, including the extent to which the four factor analysis envisioned in EPA’s visibility protection program is suitable for application to non-point sources. The FLMs will probably wish to weigh in on this topic upon their return.

**Action item**: Curt offered to send Aislinn examples of four factor analyses for source categories that Colorado did in the first Regional Haze Planning period. Aislinn said she’d be very happy to get those.

**5. Next Steps**

See action items highlighted in these notes.

**6. Next Call Feb. 27, 2019 10-11 am mountain**