**REGIONAL HAZE PLANNING WORK GROUP**

**CONTROL MEASURES SUBCOMMITTEE**

**Notes of teleconference**

**Monday, April 27, 2020**

**Action Items that resulted from the call**

* None

**AGENDA ITEMS**

**1. Roll call**

Abq (Ed Merta) AZ (Elias Toon), CO (Curt Taipale), HI (Mike Madsen) ID (Aislinn Johns), ND (David Stroh), NM (Mark Jones), NPS (Don Shepherd), NV (Steven McNeece), UT (Jay Baker), OR (D Pei Wu), WA (Philip Gent) WY (Rob Leteff), EPA Region 6 (James Grady), WESTAR/WRAP (Tom Moore, Mary Uhl)

**2. Volunteer for note taking**

Ed Merta from City of Albuquerque volunteered.

**3. Approve meeting notes from last call**

Approved without changes.

**4. Update on each state's four-factor work**

Albuquerque, NM. Has asked its only four factor facility (Portland cement plant) for revisions to draft analysis submitted earlier. These revisions are expected by early May. Review of the revisions will then commence, with these hoped to be completed by end of May. At that point, Albuquerque hopes to be in position to assess what sorts of reductions to submit for next round of WRAP visibility impacts modeling.

Arizona. Has received four factor analyses from all 11 facilities for which analysis requested. On three of these, Arizona has come to a stopping point where it mostly agrees with the facilities, has passed these along to EPA; will be working with EPA and federal land managers (FLMs) on remaining sources as state gets closer to concurrence and determination, will pass facility analyses along to EPA and FLMs for their input, address their comments.

Colorado. 19 facilities are in the process of doing four factor work. One facility dropped off the list (a sand and gravel facility that operates intermittently, reported permitted emissions rather than actuals, which turn out to be very low). For facilities other than the foregoing, Colorado has received all info on questions that the state asked and so the state is wrapping up four factor work for these sources, and in that process the state is not seeing a lot of cost effective controls. Some of the facilities got controls in first round of Regional Haze planning, others are retiring; Colorado is finding that incremental improvements in existing controls at other facilities would not be cost effective. Colorado is still writing up its analysis for the various facilities, will take another month to finish this, will then have discussions on final decisions. Colorado used $5,000 per ton threshold for first round of regional haze planning, and a lot of states have heard this threshold referred to but it is by no means a hard and fast rule. States probably want to think about economics in their state that are unique. Threshold could be higher or lower, depending on whether, for example, population is higher or lower; state of the economy could be considered in the analysis. $5,000 threshold is not an EPA benchmark, it was just helpful guide in first planning period. David of North Dakota echoes that idea, saying that $5,000 is good start but factors in your state may drive your cost up or down -- depending on economics and what the low hanging fruit is.

Idaho. Received four factor data from all facilities that state requested to do so. State had requested more info from some of these facilities and is still working on getting that additional info, as well as on review of data already received. State may need to request even more information from some facilities. Regarding use of the $5,000 per ton threshold versus some alternative, Idaho is looking at documentation from states on a range of potential controls that might entail cost effectiveness in a range of dollar amounts close to the $5,000 figure.

Hawaii. Is reviewing four factor analyses, had asked seven facilities to submit analyses. Most of the emission units at these facilities are boilers or combustion turbines. The boilers burn fuel oil #6, with two percent sulfur content or 0.5 percent. The combustion turbines burn fuel oil #2. Other emission units involved in the analyses similarly burn various kinds of fuel oil with varying content. Sulfur dioxide cost thresholds vary from about $7,000 to about $9,000-$10,000. State also looked at low NOx burners, with cost thresholds ranging from $634 per ton to $5,000 per ton. SCR is "feasible" with certain kind of diesel equipment, at a cost threshold of $4,000 to $12,000 per ton. EPA views $5,000 per ton as "economically feasible." National Park Service says "feasible" costs range from $4,000 per ton to $10,000 per ton. Trying now to determine what is "economic feasibility" threshold to use in deciding on what control measures are required.

Nevada. Received all four factor reports requested, from four facilities: two electric generating units, two lime production plants. State now going through these reports, comparing their cost analyses to EPA Control Cost Manual. State is showing the four four factor reports to EPA, to get their initial comments. Nevada is not seeing a lot of cost effective controls yet. State says EPA has indicated they believe there might be cost effective controls above the $5,000 per ton threshold.

North Dakota. Has received the four factor reports back that it asked for from facilities and state has completed its review of the reports. State is now making preliminary decisions about cost effectiveness threshold -- cost effectiveness played into state's March 16 modeling data submittal to WRAP. "We're a little bit ahead of other states," North Dakota says, but the state's decisions are not final but instead are just based on info received to date.

New Mexico. Had requested four factor information from 23 facilities initially (this number does not count the single facility requested by Albuquerque to do a four factor report). Two EGUs have dropped off the initial list, they are not sure about their plans for the future. One of these facilities is nevertheless doing a four factor but we're dealing with that report separately from the main list of 21. $7,000 per ton was state's starting point as first cut for initial WRAP control modeling run data submitted March 16. 14 facilities met this threshold for that submittal. This threshold and the emission reductions submitted to WRAP are still very tentative, not final. For now, state has "stepped back" from analyzing reports received so far, is going to re-engage with industry about controls state selected for WRAP modeling March 16. State will ask what facilities are thinking about info collected and the state's review so far. That review is continuing, working toward equipment-by-equipment analysis with the state's permitting section, doing write ups, statement of basis for different equipment. After state meets with industry starting next week, state may provide more information on potential controls to Federal Land Managers and other stakeholders once state has reached clear understanding with facilities. State has shared what it's considering with EPA Region 6 and WRAP but no one else so far (for WRAP state provided emissions only, not controls). Hope by summer to have things in hand with four factor in order to do more with outreach.

Oregon. Sent letters out in December requesting four factor analyses -- about 20 facilities ended up being subject to the four factor request based on permitting factors. The state has experienced a delay due to Covid-19, four factor analyses from facilities will be due June 15.

Utah. Has received four factor reports back from 10 facilities that received requests for such reports from the state. State is now going through those facility reports, trying to make sure everything done right and meets state's requirements. State hopes to be done with this process by mid-or end May and give an "okay" or "not okay" to each analysis. Cost threshold not set yet, likely to be $5,000 per ton -- for Utah this is based on BACT for point sources for nonattainment areas -- Utah used the $5,000 threshold in that context and that approach has been acceptable to EPA but there may be other factors that may need to be considered by individual states. For example, economic factors for each state may dictate higher or lower threshold.

Washington. [*Note-taker's comment: at this point in the meeting the note-taker was interrupted while working from home and missed most of Washington's remarks. The note-taker requested that Washington provide a written summary and the following is that summary, written by Philip Gent*.]

Washington has received the 4-Factor analysis for their Pulp & Paper industry and are in the process of reviewing. The refineries in Washington have a due date for 4-Factor analysis of 4/31/2020 and analysis will start upon receiving the input. The sole cement plant in the state has sent a letter in which they posit that they do not need to perform a 4-factor analysis as a result of previous work the facility has done. This is similar to the Oregon cement plant work and appears to be an acceptable method, but leaves some questions about NOx to be addressed.

One of the primary aluminum smelters in the state has recently decided to go into curtailment. This resulted in the voiding of an Agreed Order with the facility to install a wet scrubber for SO2 emissions. Ecology is currently trying to determine the best path forward for obtain enforceable SO2 emission reductions. Washington has another primary aluminum smelter that is in curtailment, so consistency in approach will be needed.

Ecology in the last couple of years won a court case on a BACT cost threshold. This cost could be considered as a starting point in the determination our regional haze 4-Factor analysis.

Wyoming. Requested four factor analyses from 20 facilities, got responses from all that were either a full four factor analysis or an emissions update that showed the Q/d for a facility had fallen below 10 and thus no four factor analysis was necessary. As a result of that process, the state has 16 four factor analyses from facilities to review and is about halfway done with these. State is still waiting on final EGU shutdown info. State does not have a dollar per ton cost threshold yet, want to get through review of the analyses first.

**5. Survey state interest for potential extra model run over summer**

Curt asked Tom for a recap on this topic.

Tom's recap was as follows. Current modeling run being done now is based on input from eight states submitted to WRAP on March 16, comprising in the neighborhood of 50 thousand tons of potential emission reductions. We're on path to presenting results of that modeling, which will be expressed as changes in visibility on Most Impaired Days in 2028, allowing states to compare the benefit of those potential reductions to the on the books/on the way scenarios. The first thing to do is to look at the latter, which WRAP is releasing today, in the format of a big spreadsheet that users can go through looking for the data they need. The goal is to have results from the "potential additional controls" first round modeling (PAC #1) ready to present during a couple of WRAP webinar sessions on May 19 and 20. Those results will allow users to see visibility benefits of modeled reductions. Timeline as of now for the second round of modeling of PAC is to have a July 1 submittal deadline for states to get their emission reduction data to WRAP. Tom understands that states will be getting results back from facilities on an ongoing basis and will have to make decisions, WRAP is open to changing the submittal date (for example, to July 15) if that really makes a difference for more states being able to provide inputs. Second round of PAC modeling will be opportunity to make changes/corrections to first PAC run. Not all numbers have to be negative -- if you learn there's some possibility emissions could go up it's okay; from modeling perspective, changes in either direction are okay as a result of applying controls. August will be the time for WRAP to deliver the PAC #2 round of modeling results.

Curt said each state will have to assess where they are with four factor process and the timing of when they have to bring their plans to their respective boards/commissions/regulatory bodies. Colorado will be submitting its plan in August -- Colorado has a unique deadline related to legislative process. Thus, if Colorado had model output from WRAP, the state wouldn't be able to use it, due to the legislative time factor. Other states might be in different situation.

Curt asked the group whether there any states that think they would be providing estimates for a PAC # 2 modeling run and if so what time frame for submittal and distribution of results would in the state's view be best?

Tom interjected that he had a thought. We're trying to get time for people to finish this work, now we're in a box because states want to turn in plans for their regulatory process, which is great but Tom wanted to highlight that the PAC #1 and #2 modeling results are not "committed" controls, i.e. they're not a commitment by states to actually implement the controls being modeled. If the PAC #1 and #2 modeling results happen to show that there's a potential emissions reduction in a neighboring state it's just a potential reduction. Tom wondered if this consideration might change anybody's thoughts on using the results of the PAC modeling. Tom added that he's not sure what the answer is but we need to be sure everyone understands there's no hard and fast targets here and these controls being modeled in the PAC runs may never be implemented.

Mark (NM) said that his concern with a July 1 submittal date for PAC #2 is that this date would provide some states with early legislative/regulatory plan deadlines with additional info, but the July 1 date would be only about one month from receiving results of the first PAC run to allow for gathering and processing information necessary to make a submittal for the second PAC run. One month is not a lot of time to digest info, so to Mark it seems that a July 15 deadline would be most helpful for New Mexico. We could make either deadline work but there are pros and cons for each.

Elias (AZ) said Arizona would favor July 15 deadline or later, to deal with the last minute info the state expects from facilities.

D (OR) said that a later date is better for Oregon too. Review of analyses that state expects to get back will entail a major time crunch.

Tom said that some states are trying to get their SIPS done really early, for example Colorado and Montana, but further modeling run in 2021 could be possible, with a lot more info based on a much more finalized control run. Maybe holding off would be better as opposed to doing it all now and getting fire hose of info.

Curt noted that WRAP never did a finalized PAC run in first Regional Haze planning round, reflecting final set of controls decided upon by each state, so we didn't really know what the RPGs were. There are pros and cons to each option.

Mark (NM) stated that we should look at some time in July for PAC #2, seems like good idea to have this additional round in July and then a third round (PAC #3) in early 2021.

Tom said he thinks WRAP will have resources to do a third round, but states have to stay synchronized and keep the ball moving forward. Deadlines in modeling are somewhat arbitrary, we could change them.

Mark (NM) reiterated that seeing the results of PAC #1 will help inform how various states approach later rounds based on their particular situation.

**6. Other Topics?**

Curt said that the subcommittee's next scheduled call would fall on Memorial Day. He suggests moving the call to Tuesday, 10 to 11. Curt asked group members to send any requested agenda items to him. He also said he'll look into using Google as the conferencing tool for the next meeting.