

Consultation for Regional Haze Planning in Northern Class I Areas

2004-2005 Discussions

During 2004 and 2005, a number of discussions were held between state and tribal representatives in the upper Midwest concerning air quality planning to address regional haze in the four class I areas in northern MI and northern MN. A summary of these calls and meetings is provided below.

July 8, September 16, December 1, 2004 and March 15, 2005 Conference Calls: Midwest RPO (MRPO) staff and MN and IA representatives held several initial calls to review a draft protocol ("Meeting Reasonable Progress Goals for Haze in the Upper Midwest", July 29, 2004), and discuss the progress of the MRPO's air quality modeling.

May 24, 200: Meeting in Madison, WI (see "Meeting Summary, Regional Haze in Northern Class I Areas (Boundary Waters, Voyageurs, Isle Royale and Seney)")

July 6, 2005 Conference Call: Representatives from ND, MN, WI, MI, WRAP, CENRAP, and MRPO participated in a conference call to continue the coordination effort concerning regional haze requirements for the four northern class I areas.

Larry Bruss (WI) asked what MN would do if expected controls (e.g., CAIR) are not enough to meet the reasonable progress goals for their class I areas? What are the options for dealing with interstate impacts? What does EPA expect us to do in terms of "consultation" and working together to address the reasonable progress goals in these class I areas?

It was agreed that we should invite EPA to the next call to discuss SIP approvability and consultation requirements. It was also noted that one objective of this inter-state/inter-RPO coordination effort is to develop a mutually agreeable solution for meeting the reasonable progress goals in these class I areas. To this end, MRPO, CENRAP, and WRAP will share modeling results and, as necessary, collaborate on any possible control strategies.

Mike Koerber (MRPO) reviewed the action items from the May 24 meeting in Madison, WI. First, a copy of the MRPO's latest schedule, with policy and technical activities was distributed via e-mail along with the agenda for this call. Chuck Layman said that CENRAP's schedule will be distributed shortly. Tom Moore said that he just sent out via e-mail the WRAP's current modeling schedule.

Second, new composite back trajectories (prepared by Donna Kenski, LADCO) were distributed via e-mail on June 6. These new trajectories indicate where the air is most likely to have come from on poor air quality/visibility days and on good air quality/visibility days. Chuck Layman said that CENRAP also prepared trajectories for Boundary Waters as part of their Causes of Haze study. The LADCO and CENRAP trajectories are qualitatively similar.

Third, summaries of the updated MRPO modeling was distributed via e-mail along with the agenda for this call. Mike Koerber reviewed the results for Boundary Waters, which indicated

that only one scenario (EGU1 reductions applied throughout the 13-state Midwest Governors Association region - see <http://www.midwestgovernors.org/states/>) would meet the uniform rate of progress goal in 2018. (For more information on the EGU1 and EGU2 controls, see http://www.ladco.org/reports/rpo/Regional%20Air%20Quality/WP_EGU_Version_31.pdf).

Finally, there was a short discussion on the steps being taken to address BART. MRPO is working with their states to finalize the list of BART-eligible sources, conducting modeling to determine which of these sources are subject to BART, and then conduct source-specific engineering analyses to set BART emission limitations. A policy decision is needed on whether to accept EPA's position that CAIR satisfies the BART requirement for EGUs. The CENRAP States are responsible for their own BART work. MN and IA, in particular, have done a lot of work, which could be used to approximate BART emission reductions in a future modeling run, if necessary.

August 9, 2005 Conference Call: Representatives from ND, MN, IA, WI, MI, NPS, USFS, WRAP, CENRAP, and MRPO participated in a conference call to continue the coordination effort concerning regional haze requirements for the four northern class I areas. (EPA was asked to participate to discuss SIP approvability, but they were not ready to do so.)

Larry Bruss suggested that in the absence of EPA guidance, we develop our own SIP approach, which includes the reasonable progress goal for these four class I areas. Example goals include: (1) a uniform rate of progress, and (2) limiting the visibility impact (measured in deciviews) of each state. Prior to the next call, Larry (and Mike Koerber) will prepare a preliminary list of options for the reasonable progress goal. Also, CENRAP will share its table identifying various rule requirements and its draft SIP format. This information may form the basis for our SIP approach.

Chuck Layman noted that CENRAP's Causes of Haze Study is almost done and will be released shortly. He also said that CENRAP will be conducting further analysis of its class I areas, and will do work to identify source/state contributions and candidate control measures. CENRAP's strategy modeling will begin in a couple months. Mike Koerber said that MRPO's Round 3 strategy results will be available in mid-September and will be discussed on the next call.

There was a discussion on BART. It seems that most states will be identifying BART-eligible sources and determining which of these sources are subject BART, and then will be asking those "subject to BART" to conduct a source-specific engineering analysis. The "model plant" work done by MACTEC should be helpful in these source-specific analyses - see

Technical Memo:

http://www.ladco.org/reports/rpo/MWRPOprojects/Strategies/Technical_Memo_LADCO-2.pdf

ICI Boilers:

http://www.ladco.org/reports/rpo/Regional%20Air%20Quality/Boiler_BART_Engineering%20Analysis%20%2B%20Appendix%20A.pdf

Refineries:

<http://www.ladco.org/reports/rpo/Regional%20Air%20Quality/Initial%20draft%20BART%20-%20Refineries%20%2B%20Appendix%20A.pdf>

Cement Plants:

http://www.ladco.org/reports/rpo/Regional%20Air%20Quality/Cement_BART_Engineering%20Analysis%20%2B%20Appendix%20A1.pdf

Iron and Steel Mills:

<http://www.ladco.org/reports/rpo/Regional%20Air%20Quality/Iron%20&%20Steel%20Mills%20BART%20Engineering%20Analysis%20%2B%20Appendix%20A.pdf>

None of the states on the call have yet taken a position of EPA's statement that CAIR satisfies the BART requirement for EGUs.

Also, MN will work with MRPO on a modeling analysis to estimate the impact of BART controls on the northern class I areas.

Finally, Mike Koerber provided a brief update on what's happening with the Midwest Governors Association on IL's emission reduction initiative. Henry Henderson has been hired to prepare a scoping report identifying options and stakeholder comments. His report is expected later this month. Illinois is hoping to schedule a series of workshops this fall and have a policy summit for state commissioners in November. Also, there was a short discussion in Des Moines on July 16 with the Midwest Governors Association, as part of the U.S. Governors Association meeting.

September 26 Conference Call (Notes prepared by Annette Sharp, CENRAP):

Representatives from ND, MN, IA, MI, WI, Leech Lake Band of Ojibwe, CENRAP, MRPO, WRAP, FLM, EPA (Region 5 and OAQPS) participated in a conference call to review BART activities, and to discuss a draft paper prepared by WI on meeting reasonable progress goals. A point was made that MO should be participating in the call as a potential contributor.

I. Update on BART Work

A. MRPO

Mike Koerber presented MRPO's work. The MRPO's BART Determination Process Includes:

- Step 1: Identify BART-eligible sources
- Step 2: Determine which BART-eligible sources are subject to BART (Sources which are *reasonably anticipated to cause or contribute to visibility impairment in any class I area*)
- Step 3: For sources subject to BART, conduct engineering analysis of emissions control alternatives
- Step 4: Perform cumulative air quality analysis (assess degree of visibility improvement due to emission reductions from all sources subject to BART)
- Step 5: Based on engineering analysis and air quality analysis, establish BART emission limitations. (Note, as an alternative to source-specific BART, states may implement an emissions trading program if it achieves greater reasonable progress.)

How MRPO determines which BART-eligible sources are subject to BART?

- EGUs (no action at this time)
 - USEPA BART Rulemaking (July 6, 2005): "*CAIR achieves greater progress than BART and may be used by States as a BART substitute.*"
- Non-EGUs (handful of facilities under review)
 - Individual Source Attribution Approach (CALPUFF Modeling): Prioritize modeling for those non-EGU sources with $Q/d > 5$ (i.e., initial CALPUFF

modeling indicated that < 0.5 dV impacts associated with Q/d combinations < 5)

MRPO BART Work Products

Phase I

- Best Available Retrofit Technology Engineering Analysis (March 30, 2005):
 - Boilers
 - Petroleum refineries
 - Cement plants
 - Iron and steel mills
- “Best Available Retrofit Technology Engineering Analysis for Non-EGU Sources – Summary and Recommendations for Next Steps”, March 30, 2005, MACTEC

Phase II

- Workshop – February/March 2006(?)
- State BART guideline – builds off EPA guideline and suggests default control technology and emission limitations

B. CENRAP

Chuck Layman presented CENRAP’s work with additional information provided by Chad Daniel (IA)

The CENRAP’s BART Determination Process Includes:

- Step 1: Identify BART-eligible sources– Texas is still working on their list and Louisiana has had to concentrate on immediate environmental impacts from Hurricanes Katrina and Rita
- Step 2: Determine which BART-eligible sources are subject to BART
 - Causes of Haze Work presented at RPO Directors Meeting and to POG in October. QA Work Order let to check work done.
- Step 3: For sources subject to BART, conduct engineering analysis of emissions control alternatives
- Step 4: Perform cumulative air quality analysis (assess degree of visibility improvement due to emission reductions from all sources subject to BART)
- Step 5: Based on engineering analysis and air quality analysis, establish BART emission limitations. (Note, as an alternative to source-specific BART, states may implement an emissions trading program if it achieves greater reasonable progress.)

How CENRAP determines which BART-eligible sources are subject to BART?

- CENRAP focused on non-EGUs and without Texas has 81 sources and with EGUs and without Texas has 109 sources. CENRAP used 2002 Base B emissions for the Q/d > 10 calculation. Individual analyses are left up to each state. The first draft of these facilities is due at the end of the week.

CENRAP Next Steps: (1) estimate BART emissions; (2) develop control strategies; and (3) support emissions Trading Committee

Bruce Polkowsky, NPS, asked if CENRAP or MRPO were looking at any IPM modeling similar to the work in VISTAS. Neither CENRAP nor MRPO were considering that option.

II. Meeting Reasonable Progress Discussion

Bob Lopez (WI) discussed the draft Meeting Reasonable Progress Paper developed by Larry Bruss (WI). Kathy Kaufman stated that EPA staff had some reservations about the assumption

that meeting the uniform rate of progress equated with meeting reasonable progress. Much discussion ensued.

Folks agreed that the paper was a good starting point for discussion. Bruce Polkowsky agreed to develop the issue of “the slope of the line” for the next call. He stated that the Regional Haze Rule looked at the uniform rate of progress as a “guide.” Bruce intends to modify the WI paper to reflect his proposal by the end of the week which would then be made available to the group for discussion at the next conference call.

October 7, 2005 Conference Call: Representatives from ND, MN, WI, MI, NPS, USFS, WRAP, CENRAP, LADCO, USEPA, and the Fond du Lac and Mille Lacs Tribes participated in a conference call to discuss a proposed approach for determining reasonable progress (see “Approaches for Meeting Reasonable Progress for Visibility at Northern Class I Areas”, Draft, September 29, 2005). After the discussion on the draft paper, a suggestion was made to perform a test case. Here is an outline of the proposed test case:

1. Identify and Prioritize Sources - focus on power plant SO₂ emissions
2. Identify Control Options for Priority Sources - consider five scenarios: CAIR based on IPM (with trading), CAIR based on IPM (no interstate trading), BART for EGUs in a 6-state region (ND, SC, MN, IA, WI, MI), EGU1 in 6-state region, and EGU2 in 6-state region
3. Assess Effect of Existing Programs for Priority Sources - summarize 2018 SO₂ emissions for five scenarios
4. Evaluate Control Options for Priority Sources - conduct cursory examination of the four statutory factors (costs of compliance, time necessary for compliance, energy and non-air quality environmental impacts of compliance, and remaining useful life of any potentially affected sources)
5. Compare Control Strategies with URP - conduct air quality modeling for the five scenarios and present results on graphic with URP line

November 2, 2005 Conference Call: A brief conference call was held on November 2 to discuss how to address the four statutory factors for the proposed test case. Larry Bruss said that his staff would conduct an analysis for WI sources by the end of the month. This analysis will be reviewed on the next call.

December 5, 2005 Conference Call: Representatives from ND, MN, WI, MI, NPS, CENRAP, LADCO, USEPA, and the Fond du Lac Tribe participated in a conference call to discuss WI's draft analysis of the four factors. Farrokh Ghoreishi (WI) presented the analysis, as summarized in “Preliminary cost and impact analysis for SO₂ control on EGUs in Wisconsin”, December 1, 2005. Similar analyses are needed by other states, but no commitments were made to do so at this time.