

**Notes of August 14, 2015, Meeting of the
AERMOD Model Evaluation Workgroup
EPA, Research Triangle Park, NC**

The kick-off meeting of the AERMOD Model Evaluation Workgroup (WG) was held on August 14, 2015, at EPA's campus in Research Triangle Park, North Carolina. WG members participated both in-person and over the phone. Those participating in-person included:

- John Bunyak—Consultant to WESTAR
- Chris Owen—EPA, OAQPS (**Study Management Team Member**)
- Cathe Kaliz—API (**Study Management Team Member**)
- Dave Heist—EPA, ORD
- Craig Nicholls—BLM
- Rebecca Matichuk—EPA, Region 8
- Deanna Huff—Alaska DEC
- Clint Tillerson—Amec Foster Wheeler
- Tom Damiana—AECOM
- Jeff Panek—IES
- Michelle Synder—UNC

Those participating by telephone included:

- Mary Uhl—BLM (**Study Management Team Member**)
- Darla Potter—Wyoming DEQ (**Study Management Team Member**)
- Doug Blewitt—Consultant to API (**Study Management Team Member**)
- Tom Moore—WESTAR
- Susan Bassett—BLM
- Theresa Alexander—BLM
- Bret Anderson--USFS
- Gail Tonnesen—EPA, Region 8
- Erik Synder—EPA, Region 10
- Doris Jung, Colorado DPHE
- Josh Nall—Wyoming DEQ

After introductions and review of the agenda, the following presentations provided participants with background and summary information regarding the Denver-Julesburg Basin and AK Field Studies, and review of the study data¹:

- Denver-Julesburg Field Study (John Bunyak)
- Alaska Field Study (Tom Damiana)
- Amec Data Review (Clint Tillerson)
 - Alaska data—cursory review

¹ All of the PowerPoint presentations for the meeting were emailed to WG participants on 8/13/15.

- Denver-Julesburg data—detailed review

Doug Blewitt then followed the summary presentations with his recommendations for further analysis of the Denver-Julesburg and Alaska field studies data, covering both the data review and model evaluation phases of the study.

Following Doug's presentation, the WG had an open discussion period. A summary of those discussions follows with action items highlighted.

- Deanna mentioned that the Alaska DEC is currently reviewing the CEMS data, and they will prepare a report when its review is completed. **Deanna said that she would provide the WG a copy of the report when it is available.**
- Tom D. mentioned that there has been some modeling of other Alaska drill rig data that he could share. Doug shared some BP Prudhoe Bay modeling data previously. **If Tom has data in addition to the Prudhoe Bay data, he will share it with the WG.**
- Tom M. mentioned that some wind tunnel analysis of structures may be beneficial. Doug said that wind tunnel analysis would be good after we evaluate the data more. Dave said that EPA's ORD has a wind tunnel, and they are collecting lots of wind tunnel data for low, wide buildings and closed structures. They are continuing to analyze these data.
- Doug said that enhancements to turbulence in downwash calculations are needed. Jeff also expressed interest in progress on building downwash, especially for open structures.
- Jeff pointed out that AERMOD models 1-hr average emissions, and that sub-hour average modeling would require AERMOD revisions.
- Tom D. asked where this works fits into model innovation. Chris mentioned that EPA is also evaluating CALPUFF, not just AERMOD. EPA is reviewing Lagrangian models as well.
- Chris said that he set up a google site to host study data for sharing among the WG participants. **He said that he would begin populating the site.** John mentioned that the 12 attachments to the Amec data review report contains all of the AK and CO data files and related information and would be a good start for populating the google site.
- **Chris also mentioned that later he will develop a public website for the project that would provide information to a broader audience.** (Note that a public website for the project currently exists at:
<http://www.wrapair2.org/DrillRig.aspx> Perhaps that would be a good start for Chris' public website?)
- Several folks emphasized the need for people to volunteer to work on the WG. A lot of work needs to be done. **So, WG participants are asked to spread the word and encourage folks to volunteer to become active WG participants.**
- Tom mentioned that we have reached out to WESTAR's Technical Committee to solicit WG participants. He suggested that we also reach out to WESTAR's Planning Committee because Planning Committee members may also have

dispersion model and data review expertise. **John will follow-up with the Planning Committee to seek their participation on the WG.**

- **Chris said he would try to clarify required tasks that can be to compartmentalized based on skills and expertise.**
- Cathe said that API can contribute another \$25k to continue the data review. **The Study Management Team will need to decide how best to spend this additional money.**
- Tom suggested that the WG develop a model evaluation plan or protocol by the end of the year while John Bunyak's time is available to help out in the process. The evaluation plan would include completion of the data processing and formatting that Amec started. The actual model evaluation could then be done at a later date. **John will prepare a draft workplan to accomplish this task. The workplan will focus on short-term tasks and milestones.**

Summary of Action Items:

- Deanna said that she would provide the workgroup a copy of ADEC's report on its review of the CEMS data when it is available.
- Tom D. will share additional Alaska modeling data with the WG (if that data are different from the Prudhoe Bay data previously provided by Doug).
- Chris will begin populating the drill rig study google site (others can help populate the site as well).
- Chris will later develop a public website for the project that would provide information to a broader audience.
- All WG participants are asked to spread the word and encourage folks to volunteer to become active WG participants.
- John will follow-up with the WESTAR Planning Committee to seek their participation on the WG.
- Chris said he would try to clarify required tasks that can be to compartmentalized based on skills and expertise.
- The Study Management Team will need to decide how best to spend the additional \$25k provided by API.
- John will prepare a draft workplan to develop a model evaluation plan or protocol by the end of the year. The workplan will focus on short-term tasks and milestones.

Next Call

The next call of the WG will be held on September 3, 2015, at 11:00 a.m. MDT. Call-in number: 800-768-2983; Access Code: 4918837. (Note: at the meeting we announced that the next call would be on September 9 at 9:00 a.m. MDT. To better accommodate more WG participants, particularly those in Alaska and on the west coast, the date and time of the call have been changed.)