

# McVehil-Monnett Associates

## Air Quality Newsletter

No. 2: 4<sup>th</sup> Quarter, 2000

### UPCOMING CHANGES IN REGULATORY MODELING

#### **MMA EXPERIENCES CONTINUING GROWTH**

**It's been a busy and rewarding year for all of us here at MMA. Thanks to all of our clients and the trust you have in our services, we continue to grow in number and expand in technical capabilities.**

**In Denver we are bulging at the seams. As a result, in January we will be expanding into a second building adjacent to our current location.**

**Under the direction of Mr. Jay Jones, our new Arizona office is already growing and busy on several challenging air quality and environmental management projects. We have already received excellent response to Jay's environmental management services group, which we see as an excellent compliment to our traditional air quality compliance services.**

**Alas, because we have been so busy, we have not met our goals for the Air Quality Newsletter. With this issue, we recommit ourselves to getting back on a more regular publication schedule. We will also be trying some new formatting and content approaches. Your comments would be appreciated at [bmonnett@mcvehil-monnett.com](mailto:bmonnett@mcvehil-monnett.com).**

MMA attended the 7<sup>th</sup> Conference on Air Quality Modeling held June 28 – 29, 2000 in Washington, DC. The main purpose of the conference was to allow public comment regarding the Environmental Protection Agency's (EPA's) proposal to change modeling techniques in Appendix W of 40 CFR 51 (also known as the Guideline on Air Quality Models, or simply, the Guideline). Subsequent to the conference, the public comment period remained open until August 21, 2000. EPA is now in the process of reviewing comments and will publish the final Guideline changes in an upcoming Federal Register notice. After the Guideline changes become final, there will be a one-year transition period in which either the old or new Guideline techniques can be used, although there will likely be pressure by the regulatory agencies to use the new techniques during that time frame. At the conclusion of the transition period, only new Guideline techniques will be allowed for regulatory modeling purposes.

#### **AERMOD TO REPLACE ISC**

The most substantial of the proposed Guideline changes involves replacing the ISC dispersion model with the new AERMOD model. AERMOD incorporates 1980's science into dispersion modeling and is a step forward from the 1960's science implemented in ISC. Although spun as an improvement over ISC by the presenters at the conference, industry and modeler comments highlighted considerable concern with AERMOD. Industry noted that AERMOD can predict drastically different results than ISC depending on dispersion conditions (sometimes higher and sometimes lower), and voiced concern that a previously permitted facility (modeled in compliance with air quality standards using ISC) could potentially be out of compliance using AERMOD. Modelers voiced mild concern with the fact that AERMOD has no screening mode and outright dissatisfaction that the model does not incorporate the new building downwash algorithms (PRIME algorithms).

#### **CALPUFF TO BE USED IN LONG- RANGE TRANSPORT STUDIES**

Probably the second most substantial proposed change involved implementing the CALPUFF dispersion model for use in long-range transport modeling studies (distances beyond 50 km). As the name implies, CALPUFF is a "puff" model that simulates individual puff dispersion in a three-dimensional wind field. Generally, this model was more favorably accepted by the audience at the conference, possibly because it is scheduled to be updated with the PRIME downwash algorithms this fall. (Because of "budget difficulties", the AERMOD developers could provide no hint of when that model

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would be updated to include PRIME.) The greatest concern regarding CALPUFF was voiced by industry and revolved around the cost of implementing the model. Whereas AERMOD is somewhat more complicated and resource intensive than ISC, CALPUFF is vastly more so, and the costs of implementing a CALPUFF study directly reflect that fact.

An interesting side discussion regarding CALPUFF and “alternative” dispersion models was also presented. It was pointed out by EPA that there are cases when using CALPUFF at distances less than 50 km is appropriate and that it could be used on a case-by-case basis as an alternative to AERMOD. It was also noted that the criteria for using a model on a case-by-case basis have been revised or reworded in a manner that should make it easier for modelers to get approval to use an alternative model. Thus, some regulated sources may find benefit using CALPUFF for more traditional modeling needs since three-dimensional puff transport usually results in lower receptor concentrations.

A large amount of information was presented at the modeling conference, more information than can be summarized in our newsletter. If you have questions or would like further information, please contact US.□

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## **IMPORTANT REGULATORY UPDATES AVAILABLE ON MMA WEBSITE**

Our Regulatory Update link on MMA’s website ([www.mcvehil-monnett.com](http://www.mcvehil-monnett.com)), now has summaries of individual Federal Register notices we believe may be pertinent to your company. The summaries, which will be accessible for approximately three months after publication in the Federal Register, currently include:

- Accidental Release Prevention Requirements; Risk Management Programs Under the Clean Air Act Section 112(r)(7); Distribution of OCA Information
- Notice of Availability for Draft Guidance on BACT for NO<sub>x</sub> Control at Combined Cycle Turbines