

CORRESPONDENCE/MEMORANDUM

DATE: April 15, 2013

TO: Statewide Construction Permit Team
Statewide Operation Permit Team
Statewide Compliance Team

FROM: Dispersion Modeling Team – AM/7

SUBJECT: Transition Guidance for Updated Processed Meteorological Data for Use in AERMOD

From December 2012 through January 2013, USEPA released new versions of AERMET and AERSURFACE, along with March 2013 clarifications on a low wind speed threshold. These adjustments along with a December 2011 correction to AERMINUTE and February 2013 comment from USEPA on a specific PSD permit have triggered updates to the 2006-2010 meteorological data used in AERMOD.

The total number of available hours is lower with this data set than in the original 2006-2010 as wind speeds of less than 0.5 m/s are now considered 'calm', and AERMOD does not compute ambient concentrations for the hour. However, the percentage of usable hours is well above USEPA and WDNR thresholds, and still much higher for rural, forested stations than the 1998-2002 data.

Sensitivity tests with AERMOD on generic stacks indicate that modeled concentrations with the updated data are similar to concentrations from the original 2006-2010 data. Of the 645 combinations of stacks and pollutants, 91% of the impacts using the updated data are within 10% of the impacts using the original data. More than 50% of the concentrations are lower with the updated data and the higher concentrations are from tall stacks with low modeled concentrations. Further, the higher impacts can be tied to changes in the handling of calm winds, and the smoothing of the change in mixing height between nighttime conditions and convective conditions.

Implementation ScheduleConstruction Permits (All Types)

Beginning May 1, 2013 construction permit applications received by WDNR that require a modeling analysis will be evaluated using the updated 2006-2010 processed meteorological data. PSD applicants and other consultants will be notified as soon as practicable of the availability of the updated data. Applications received before May 1, 2013 will use the original 2006-2010 data.

Operation Permits (All Types)

Operation permits that will be public noticed after June 1, 2013 and require modeling under current policy will use the updated 2006-2010 meteorological data.