



March 1, 2011 EPA Memorandum

Additional Clarification Regarding Modeling for the new 1-hour NO₂ NAAQS

February 9, 2010 new 1-hr NO₂ NAAQS is published in FR

- New NAAQS effective April 12, 2010

June 29, 2010 EPA issues first guidance clarifying applicability of 40 CFR 51 Appendix W to new NAAQS

- 3-tiered approach to annual NO₂ modeling applies to 1-hour NO₂ modeling
- Established interim SIL of 8 ug/m³
- No exemption intermittent emissions.

March 1, 2011 EPA issues additional clarification regarding application of Appendix W to 1-hour NO₂ modeling

- Currently under Review

Salient items of the March 1, 2011 Memorandum

- Re-affirms interim SIL of 8 ug/m³
 - AERMOD dispersion model change to support significant contribution analysis
- Re-affirms approval of the 3 Tier approach to 1-hour NO₂ modeling.
 - Use of default NO/NO₂ ambient ratio of 0.8 under Tier 2 analysis without additional justification
 - Use of a default in stack NO₂/NO_x of 0.5 in absence of more appropriate source specific information in a Tier 3 PVMRM/OLMGROUP ALL analysis
 - No preference for the use of PVMRM or OLMGROUP ALL in a Tier 3 analysis (may change in future)
- Treatment of Intermittent Emission units
 - Allows certain emission units (i.e., emergency engines) an exemption from 1-hour NO₂ modeling. May also exempt startup/shutdown emissions in some cases.

Salient items of the March 1, 2011 Memorandum (cont.)

- Identifying nearby sources to include in cumulative multi-source modeling analysis
 - EPA suggests a more complicated somewhat more subjective approach
- Combining Modeled results and monitored background.
 - “first tier” approach is to add design value from representative monitoring site (i.e., 98th percentile of annual distribution of daily maximum 1-hr values averaged across most three recent years)
 - Use of a multi year average of the 98th percentile by season and hour of the day (i.e., develop 98th percentile background values to be added to modeled concentration)
 - EPA rejects hour-by-hour concurrent modeled/monitored approach for a 1-hour NO₂ (or SO₂) demonstration except for relatively isolated sources