

North Carolina Division of Air Quality
Uniform Policy and Documentation Standards
for
Emission Inventory Estimates
Effective October 3, 2002

Background

The North Carolina Division of Air Quality requires certain facilities within the state to provide an emission inventory annually, and others on a three-year or other basis. An integral part of these inventories is the calculation of emission estimates. This can take many forms, but the general rule is that the estimates must be made using the “best available information.” These estimates may be similar, and at times even identical, with estimates made for permitting purposes. However, the best available information and estimation techniques may change over time to reflect new information that better represents the actual emissions. The production rates and other operational characteristics will likely change from year to year, also. These factors make it important that facilities “show their work” when they submit their emission inventories. Historically, it has been uniform practice for the facilities to document and submit each calculation, each inventory year. Often such documentation requires literal “volumes” to show all the calculations. This is also often redundant and time consuming (expensive) for the facility and sometimes may not provide the DAQ with the information that is most useful. In addition, the interpretation of documentation requirements among the seven Regional Offices and central office may vary, causing confusion and often, additional work for everyone. Thus, there is a need for this Policy and set of standards.

General Rules and Governing Policies for Documentation of Estimates for Emission Inventories for DAQ

The short statements below should be considered the general umbrella for interpretation of the requirements for documentation of emission inventory calculation.

1. All calculations/estimates must be documented (“refreshed”), at least once each 5 years, in complete detail (“Show your work!”) and provided with the inventory required for permit renewal (for permits classified as Synthetic Minor or Small). This complete documentation should be done, as a minimum, for the calendar year prior to application for renewal of a permit and establish the “actual emissions” baseline for the purposes of this requirement. The DAQ reserves the right to request the full inventory and its documentation at any time.
2. In all cases, the emission source groupings, actual emission factors used, source of emission factors, and other information used in estimating emissions should be provided in the baseline documentation and should use id #'s, codes and descriptions consistent with the facility's active permit.
3. Emission sources that generate large quantities of emissions require details to be more stringently documented than those generating smaller quantities of emissions. This principle should not be used as a basis for dividing emission sources into small groups only to avoid providing necessary details for evaluation of emissions and controls.

4. Emission sources (or operating scenarios) with emissions less than 1.0 ton of any pollutant in a year do not have to be re-documented for interim submittals, except for statements summarizing any changes in the calculation process (changes in production, emission factor, control device efficiency, etc.) since the baseline submittal. Such calculation details for these smaller sources must, however, be maintained on site for viewing by DAQ inspectors and copies provided, if requested.
5. For larger emission sources, where there are no major changes in methods, emission factors, fuels, equipment, etc. and emission variations from baseline are less than 10%, the documentation requirements are minimal. This applies primarily where the variable causing the change was the fuel use or production. Satisfactory documentation in such cases may consist of statements summarizing the nature of the changes and updated production information that was used in the calculations, referenced back to the baseline emission estimates.
6. In all cases, where there is a change in equipment, control devices, emission factors or methods of emission estimation and resulting emissions change by more than 10% from the permit renewal baseline, the details of the calculations must be provided.
7. Calculations do not have to be “formal” (as in an elaborate volume), but must be neat and must be well organized so that individual calculations for a specific emission source or operating scenario may be logical and straightforward.
8. Documentation may be on paper; however, they may also be submitted via Microsoft (NC standard) software such as MS Word or MS Excel. They may be submitted by mail (USPS or a private parcel delivery company) or by e-mail, but are considered part of the inventory submittal and records should be kept of the submittal in case any disputes arise regarding the completeness of the submittal. If submitted electronically, set the e-mail browser to provide a “return receipt” that the document was received.
9. Any time the regional or central office requests more complete calculation, the permittee shall be required to submit them at the level of detail necessary to verify, understand and approve the estimates.