Recommendation 9 (May 2009)
AQUILA thanked Peter Woods and the other contributing colleagues for his efforts and accepted the AQUILA document N 132, asking for further minor modifications. After those minor modifications the document will be send out to the Air Quality Committee (deadline 16 May 2009 for submission to DG ENV, A. Kobe).

Recommendation 10 (May 2009)
AQUILA should draft a position paper on the best methodology for determining the uncertainty of the $PM_{2.5}$ average exposure indicator (AEI) calculated from data coming from both manual and automatic methods. This position paper shall further include QA/QC measures in order to keep the uncertainty of the AEI as low as practicable.

Recommendation 11 (May 2009)
AQUILA requests to discuss open questions (consideration of additional contributions to uncertainty, requirements for QC for operation in the field) of the equivalence procedure related to automatic PM measurements at the next meeting of subgroup of WG 15 of CEN TC 264 (3rd June 2009) and incorporate into the document on demonstration of equivalence of ambient air monitoring methods. The objective is to improve the robustness and continuity of the equivalence of the method.

Recommendation 12 (May 2009) (revised for clarification March 2011)
Data should be delivered to EEA with the same number of digits as they are handled in the network. Basic values must have at least one digit more than the relevant limit or target value.

The detection limit (DL) for SO_2, $NO/NO_2/NO_x$, CO and ozone shall be calculated by multiplying the standard deviation of zero signals with a factor of 3.3 as described in the revised versions of EN 14211, 14212, 14625 and 14626. This does not apply for the DL as described in the EN standards for PAH's, metals and benzene.

For all measurements basic values greater or equal –DL shall be accepted **as they are and used for further evaluations**. Values smaller than –DL must be discarded. **Only in** cases where values greater or equal -DL but lower than DL are not accessible, these values shall be replaced by 0.5*DL and flagged. **These provisions generally apply for all kinds of measurements.**

For manual methods and laboratory analyses, e. g. gravimetric measurements of PM and analyses of heavy metals, PAH etc. in PM, the following cases have to be considered:

Generally, any sample cannot have negative amounts of substance (PM, heavy metals, PAH etc.). Therefore, negative values should not occur. In these cases, values lower than DL, but greater or equal zero shall be taken as they are and used for all calculations. Only in cases where these values are not available, they shall be set to 0.5*DL and flagged, because there is no knowledge about the statistical distribution of values in this range.

In some cases, for example the analysis of heavy metals in PM sampled on filters, it is necessary to subtract laboratory blank values that are directly related to specific types and/or even batches of filters used. In these cases, also small negative values may occur. Then values greater or equal –DL but lower than DL shall be taken as they are and used for all calculations. Only in cases where these values are not available, they shall be replaced by 0.5*DL and flagged. Values lower than –DL must be discarded.

In contrary to laboratory blanks as described above, field blanks should generally not be subtracted from measured values.

All these values as defined above have to be used for all aggregations and calculations. When reporting individual values all values lower than DL (but greater or equal –DL) shall be reported as "<DL".

Rounding has to be the very last step of any calculation, i.e. immediately before comparing the result with the limit or target value (rounding has to be done only once). For rounding purposes, only the so-called commercial rounding has to be used.

All above rules shall be applied for reference and equivalent monitoring methods for regulated pollutants in the networks after discussion within DG ENV's Data Exchange Group.