

*National Environment Protection (Ambient Air Quality) Measure  
Technical Paper No. 10 – Collection and Reporting of TEOM PM<sub>10</sub> Data*

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are considered inappropriate for NEPM purposes. Note, however, that where volatiles form an insignificant proportion of PM<sub>10</sub>, option 2 becomes the same as option 4.

Options 1 and 2 are seen to provide acceptable courses of action for NEPM purposes. Option 1 is the preferred option, but where it is not feasible, option 2 is to be used.

The recommendations are summarised below:

1. *Wherever possible, TEOM PM<sub>10</sub> data should be adjusted through the application of a site-specific adjustment based on collocated TEOM and Hi-Vol measurements.*
2. *When a site-specific adjustment is not available and the TEOM site is known to experience a significant contribution from volatiles, TEOM data should be adjusted by the CSIRO temperature adjustment which provides a nationally consistent basis for the removal of bias due to the loss of volatiles. The temperature adjustment computed by CSIRO using the data from WA, Vic and NSW is described in Attachment 1. In applying this adjustment, the TEOM data are multiplied by a factor which varies linearly from 1.4 at daily mean temperatures less than or equal to 5 °C, to 1.2 at 10 °C and 1 at temperatures equal to or greater than 15 °C.*

It is important that the physical basis of the adjustments applied by jurisdictions is understood and, where necessary, justified. Following are some decisions and guidance to assist with the implementation of these recommendations.

- Jurisdictions are to identify the sites with existing collocated PM<sub>10</sub> data, develop the relationships between the TEOM and Hi-Vol PM<sub>10</sub> measurements, and submit appropriate adjustment factors to the PRC.
- The PRC is to review and where appropriate approve the adjustments proposed or used by jurisdictions to ensure a consistent approach.
- The PRC, together with jurisdictions, will also determine the sites where site-specific factors can be translated.
- Site-specific relationships would be in terms of environmental conditions and emissions.
- In translating to other sites, similarities in sampling conditions (e.g., meteorology, PM<sub>10</sub> emissions, and particle size distribution) are to be considered in determining the applicability of an adjustment factor.
- The national temperature adjustment is not required in regions where volatiles do not contribute significantly to the particle measurements. Jurisdictions should justify this course of action on the basis of emissions.

#### 8. DATA HANDLING AND REPORTING

The purpose of establishing equivalence between the TEOM and Hi-Vol measurements was to produce air quality data based on uniform criteria for comparison to the standards for compliance assessment.

General requirements on data validation, data handling and reporting are specified in Technical Papers No. 5, "Data Collection and Handling" and No. 8, "Annual Reports for AAQ NEPM," and in the documents given under "Quality Assurance." Additional requirements and comments specific to the TEOM are included here.

Technical Paper No. 5 recommends that, as a minimum requirement, daily PM<sub>10</sub> data should form the basis of the NEPM data set. Provision of hourly TEOM PM<sub>10</sub> data is an optional addition. The following points were considered in deciding on the treatment of TEOM data in the NEPM data set.