



## **Explanatory Statement**

### **for the Proposed Minor Variation to the National Environment Protection (Air Toxics) Measure**

#### **The National Environment Protection (Air Toxics) Measure**

The purpose of the National Environment Protection (Air Toxics) Measure (NEPM) is to provide a nationally consistent framework for the monitoring and reporting of air toxics and to provide information that will enable the National Environment Protection Council (NEPC) to establish national air quality standards in the future which are protective of human health. The NEPM also enables jurisdictions to assess air quality in a consistent manner.

The NEPM incorporates Monitoring Investigation Levels for each of the air toxics: benzene, formaldehyde, benzo(a)pyrene as a marker for polycyclic aromatic hydrocarbons (PAHs), toluene and xylenes. These are designed to provide nationally consistent benchmarks to assess the results of monitoring data generated under the proposed NEPM.

A mid-term review of the NEPM began in November 2009 and reported to NEPC in June 2010.

#### **Reasons for the proposed minor variation to the NEPM**

Information provided by jurisdictions through the mid-term review identified several areas of the NEPM that needed minor changes to improve the implementation of the NEPM and assist in meeting the NEPM purpose.

The review found that monitoring methods required in the NEPM were not generally being used as they were too resource intensive. However, other internationally recognised methods were being used which provided data valuable to the overall goal of the NEPM of collecting sufficient data regarding air toxics in Australia to enable further decisions to be made. The minor variation would enable these methods, and the data collected, to be used in achieving the overall outcome of the NEPM and increase our knowledge of air toxics in Australia.

#### **Nature and effect of the proposed variation to the NEPM**

The nature and effects of the proposed minor variation are outlined below.

**Recommendation 1:** Amend the NEPM Schedule 2, Section 3 (vi) and Section 4 (v) that requires the 4 year repeat of the desktop analysis be undertaken using the same methodology as that used in the year 1 desktop analysis. The amendment is to also allow qualitative assessment tools to be used according to the Guidance Paper for Desktop Analysis as described in recommendation 6.

#### **Rationale for recommendation 1:**

The NEPM requires the repeat desktop analysis in Year 4 to be completed using the same methodology as that used for the first analysis in Year 1. Although all jurisdictions completed the first analysis using the methods in the Guidance Paper for Desktop Analysis, circumstances have changed in most cases making it difficult for the repeat analysis to be completed using the same quantitative methods. Most jurisdictions have either not updated their emission inventories since the first analysis and/or lack the ability to conduct airshed scale modelling of air toxics, so in most cases, the repeat analysis would be based on the same data used previously. In order to respond to jurisdictions needs, provide increased flexibility and reduce costs, the NEPM would be amended by removing the following requirements:

- Schedule 2, Section 3 (iv) “In undertaking this repeat procedure, jurisdictions must reassess locations within their jurisdiction using the same methodology utilised for the initial assessment.”; and
- Schedule 2, Section 4 (v) “In undertaking this repeat procedure, jurisdictions must reassess Stage 1 sites within their jurisdiction using the same methodology utilised for the initial identification of Stage 2 sites”.

This amendment would allow jurisdictions to use an alternative procedure for selecting sites.

**Recommendation 2:**

Amend the NEPM Schedule 3 Part 3 Table 1 to allow the use of any monitoring method for measuring ambient air toxics that has been endorsed by recognised national and international agencies.

**Rationale for recommendation 2:**

The NEPM refers to various USEPA methods (i.e. reference methods) for the sampling and analysis of the five air toxics. Although some jurisdictions have adhered to these methods, others have found their expense a constraint in carrying out monitoring under the NEPM, while some have not reported data under the NEPM as they are using alternative methods. In order to address jurisdictions’ needs and maximise the amount of data collected, the NEPM would be amended to allow other recognised methods in addition to the existing methods.

The data jurisdictions have been able to provide on air toxics shows good progress towards gathering sufficient data to enable assessment and setting of standards. However, analysis of the data shows there are still some areas where there is insufficient data to enable a thorough assessment.

Information provided by jurisdictions indicates that the majority of data has been gathered by methods other than those nominated in the NEPM. These data have allowed a far greater understanding of air toxics than would be possible by only considering data collected in accordance with reference methods. To assist jurisdictions in their endeavours to gather air toxics data and improve the national awareness and understanding of their significance it has been proposed by jurisdictions that the use of other than the nominated methods should be facilitated.

It is important that any data gathered be of good quality and that methods are suitable for the level of concentrations found in ambient air. If this is not the case then meaningful comparisons nationally and between sites are not possible.

Thus there is a need to both assist jurisdictions in the use of less resource intensive methods and at the same time ensure quality of data. It is proposed that alternate methods be allowed that are recognised by agencies that have examined methods for their applicability and quality in the measurement of air toxics in the ambient air. A list of these organisations would be included in the NEPM schedule. As, over time, standards have been developed for passive continuous air toxics monitoring by recognised organisations, it is proposed that these should be included in the NEPM to further facilitate the gathering of air toxics data.

**Recommendation 3:**

Amend the NEPM Schedule 3 Part 5 Monitoring Investigation Levels, to allow cut off levels of the MILs below which further monitoring is not required.

**Rationale for recommendation 3:**

Data on air toxics has increased markedly since the initial need for the NEPM was identified. Data made available to date shows clearly that some of the air toxics pollutants such as toluene and formaldehyde and possibly xylenes are at levels well below the (Monitoring Investigation Levels) MILs in some areas and therefore may not require further investigation.

There are, however, still some areas where data are required to allow a meaningful assessment that would enable a setting of standards due to scarcity of data for benzo (a) pyrene or where concentrations might be approaching the MIL such as for benzene. This appears to be due to resource constraints as jurisdictions have tended to direct resources into the less costly forms of monitoring or those that provide both daily samples and short term data for jurisdictional management requirements.

In some cases, particularly where concentrations are low and there are no other circumstances indicating a need for monitoring (such as for precursors to photochemical smog), resources would be better directed to areas where they are most needed. This would further assist the gathering of the required data for assessment and development of standards.

The simplest way to assist this is for jurisdictions to have clear criteria that allow monitoring for an air toxic to cease. Under the Ambient Air Quality NEPM the Peer Review Committee that assists with implementation of the NEPM has developed screening criteria for just this purpose. It has worked well, for instance, with the phasing out of leaded petrol which has caused lead levels to be sufficiently low in most areas that jurisdictions can now direct their lead monitoring around specific areas as needed. Thus a method consistent with *Technical Paper No. 4 Revision 1 – January 2007 Screening Procedures* by the Peer Review Committee for the Ambient Air NEPM is seen as the best way forward.

**Recommendation 4:**

Amend the NEPM Schedule 4 Part 2 Section (iv) Reporting Proforma Table 2 to require a description of the methods used and their applicability to collect the data.

**Rationale for recommendation 4:**

To accompany the change outlined in Recommendation 2, the NEPM would also be amended by adding the following requirement:

- Schedule 4, Part 2, Section (iv), Proforma Table 2: Monitoring results “Description of method and its applicability”. A full review of monitoring methods will be completed in addition to the changes proposed in this variation.

This amendment would ensure there is enough information about other methods used to clearly establish they are robust, fit for purpose and the results are comparable with the reference methods.

**Recommendation 5:**

Amend the NEPM Schedule 4 Part 2 Section (iii) Reporting Proforma Table 1 to require reporting of data to include an accurate description of siting in accordance with AS/NZS 3580.1.1:2007.

**Rationale for recommendation 5:**

The NEPM provides requirements for siting of monitoring equipment. Although some jurisdictions have adhered to these requirements, others have found it difficult to establish compliant monitoring sites due to various constraints. To ensure monitoring data are comparable, the NEPM would be amended by adding the following requirement:

- Schedule 4, Part 2, Section (iv), Proforma Table 2: Monitoring results “Description of siting according to AS/NZS 3580.1.1:2007”. This amendment would ensure monitoring data can be interpreted and analysed in a consistent manner.

**Reasons why NEPC is satisfied that the variation is a minor variation**

The proposed variation does not affect the goal and desired environmental outcome contained in the NEPM and will have no financial impacts. As a consequence, the economic, environmental and social impacts of the NEPM are unchanged.