



2 June 2005

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Dear Kerry

The Australian Environment Business Network (AEBN) welcomes the opportunity to comment on the *NEPM Review Discussion Paper on the National Environment Protection (Assessment of Site Contamination) Measure (the NEPM)*.

AEBN is an industry and business representative body specializing in environmental issues, which affect our members. Our membership collectively has a turnover in excess of \$50 billion and employs well over 50,000 employees. Further information about AEBN can be found on our website at [www.aebn.com.au](http://www.aebn.com.au)

Overall AEBN is supportive of the NEPM as it has provided guidance to Australian jurisdictions, government agencies and landowners as to the processes required for assessing land contamination and its appropriate levels for appropriate land use. AEBN agrees with some of the findings of the report that many organisations misinterpret the NEPM's approach to identify investigation levels from which generally less server limits on land contamination can be tolerated following the use of a comprehensive risk assessment process. All too often for the investigation levels are used as the default clean up levels.

This submission follows the order of the discussion paper identifying the sections it has comments to make.

## **1. AN EVOLVING NEPM**

Overall guidance in the NEPM greatly assists in speeding up the process of contaminated site remediation. Consequently AEBN regards the NEPM as evolving set of clear guidance and technical details from which governments, the community and industry can draw upon with confidence for an increasing range of contaminated lands.

Lack of guidance for a contaminant typically results in significant time delays in developing and agreeing criteria and it is preferable that criteria be developed for commoncontaminants. Where development of criteria does occur AEBN suggests that this knowledge be feed back into the NEPM process and used to introduce new substances.

**R1 AEBN recommends that a mechanism be developed to capture quality work undertaken which sets new criteria for substances which contaminate land, and this information, subject to peer and public review, be considered for each time the NEPM is reviewed.**

In the interim special cases could be posted or referred to on the Environment Protection and Heritage Council's website as a case study for a new substance. Naturally, such case studies would only serve as guidance material, until formally adopt

## **2. ECOLOGICAL IMPACT LEVEL**

AEBN's preferred option is *Option 5 – Replace EILs with “acceptable levels” for various land uses in defined settings*. This approach should be readily understood, easy to implement and give a better overall outcome than the current EILs.

AEBN considers that the current EILs could still be useful and may be maintained in parallel with Options 5. As a consequence, *Options 2 – Retain the existing Interim Urban EILs but provide more contextual information on their derivation and application use/misuse* has some merit. Although AEBN is concerned that if the EIL levels use tighter limits than Ecological Acceptable Levels (EALs), overly conservative misuse of this criteria may still occur. Contextual information should also require additional direction on the use of EIL to ensure they are used as intended. If abuse of EILs continues AEBN considers the next review of this NEPM should consider legislative directions to counter it. Ideally, such information should be beyond the possibility of being legally challengeable, if that is possible, or at least made very difficult to challenge.

AEBN opposes *Option 4 – Eliminate generic EILs and adopt a site-specific approach for all sites that can be applied to a wider range of contaminants*, as this would introduce unnecessary confusion and delays.

It may be useful to develop *Option 6 – Develop an agreed framework/methodology for deriving and setting EILs and apply to existing EILs and derive new EILs* in conjunction with Option 5 because there will always be sites or chemicals that all outside the scope of Option 5. A process for introducing new EALs could be developed along side this process. Public and peer review of new EILs and EALs would be essential and should mark the ongoing maintenance and review of this NEPM.

### **R2 AEBN recommends:**

- **The adoption of Option 5 *Replace EILs with “acceptable levels” for various land uses in defined settings*.**
- **Include directions in the NEPM to jurisdictions on the correct use and the avoidance of misuse of EILs.**

### 3. HEALTH INVESTIGATION LEVELS

Again AEBN's preferred option is *Option 4 – develop “acceptable levels” for defined landuses in defined settings*. This approach should be readily understood, easy to implement and give a better overall outcome than the current HILs.

As with EILs and EALs the current HILs could be maintained in parallel with Option 4. Options 1, 2 and 3 are acceptable but less preferred. Again use of contextual information and directions to jurisdictions about the correct use and misuse of HILs should be also used for Options 1,2 and 3.

#### **R3 AEBN recommends:**

- **The adoption of Option 4 *Replace HILs with “acceptable levels” for various land uses in defined settings.***
- **Include directions in the NEPM to jurisdictions on the correct use and the avoidance of misuse of HILs.**

### 4. GROUNDWATER INVESTIGATION LEVELS

AEBN agrees that Option 6 is the ideal option given the anticipated implementation time, but also agrees that it is a longer term approach.

AEBN's preferred option is *Option 2— Update the GILs to the WQG 2000 and ADWG 2004.to update the current GILs.*

This should be done in conjunction with:

- *Option 4— Provide clearer linkages between Schedules B1 and B6 of the NEPM for the application of GILs and*
- *Option 5— Revise Schedule B6 on risk based assessment of groundwater contamination and provide greater prescription on developing site-specific criteria based on land use and exposure pathways, potential for receptor damage and the degree of protection required.*

AEBN is concerned that a significant number of GILs that are below routine laboratory detection limits. This issue is an ongoing impediment to making practical decisions in for remediation projects. A mechanism is required in the NEPM to address this issue. A clause such as *‘where laboratory analysis methods are impracticable or unavailable use of the best practicably available detection limits/analytical methods can be substituted’*.

#### **R4 AEBN recommends:**

- **The adoption of Option 2 *Update the GILs to the WQG 2000 and ADWG 2004.to update the current GILs and this be done in conjunction with:***
  - ***Option 4— Provide clearer linkages between Schedules B1 and B6 of the NEPM for the application of GILs and***

- *Option 5— Revise Schedule B6 on risk based assessment of groundwater contamination and provide greater prescription on developing site-specific criteria based on land use and exposure pathways, potential for receptor damage and the degree of protection required.*
- **The NEPM permit alternatives to analytical methods where detection limits or the method is unavailable or impractical.**

## 5. TOTAL PETROLEUM HYDROCARBONS

AEBN is concerned in relation to the comment about Total Petroleum Hydrocarbons (TPH) ‘it is based on relatively unsophisticated measurement technology, that has been supplanted by advance in analytical and computing technology’ appears to be an academic comment.

An AEBN member recently tried to obtain undertake speciated analysis as set out in the NEPM for a high priority remediation, only to find out that it is was not routinely available and was expensive compared with TPH analysis. Eventually, due to time constraints the member had to use TPH analysis as a surrogate measurement. The speciated analysis was not completed before the project report was finished.

As a consequence *Option 2—Adopt existing site criteria, based on overseas or Australian values, for TPH as presently defined.* for defined cases (dealing with standard products – petrol, diesel, avgas) is preferred because it would have the shortest implementation timeline and cover the majority of sites.

AEBN also supports *Option 4— Define TPH within the NEPM so that it is understood what the term means, and develop or adopt relevant criteria based on this. This may be linked with specifying laboratory methods for identifying and quantifying hydrocarbon components. in any case.* Option 4 appears necessary to support Option 2 with the consequences of reducing confusion through simplification.

For a longer term goal, *Option 6— Provide specific guidance on Investigation Levels for aliphatic and aromatic (monocyclic & polycyclic) hydrocarbons* should also be developed for other products.

### **R5 AEBN recommends:**

- **The adoption of *Option 2 Adopt existing site criteria, based on overseas or Australian values, for TPH as presently defined,* along with the development of *Option 4— Define TPH within the NEPM so that it is understood what the term means.***
- **The NEPM permit alternatives to analytical methods where detection limits or the method is unavailable or impractical.**

## 6. FUEL ADDITIVES

AEBN's preferred option is *Option 2— Develop, or adopt existing, criteria, for specified fuel additives based on overseas or Australian values* because it can be implemented in a short time frame. Option 3 could be developed subsequently.

### **R6 AEBN recommends:**

- **The adoption of Option 2—*Develop, or adopt existing, criteria, for specified fuel additives based on overseas or Australian values***

## 7. ASBESTOS

The setting of asbestos limits as discussed in the paper simply shows that non-scientific issues still persist for this substance. Until the political debates settle down the limits on asbestos will be subjected to a mix of subjective and objective debate. Nevertheless, some guidance is better than none so Option 2 and 3 are preferred.

### **R7 AEBN recommends:**

**The adoption of Option 2— *The NEPM be revised to provide more information relating to the investigation and assessment of asbestos issues.***

## 8. PERSISTENT ORGANIC POLLUTANTS

The issue of having to screen all sites for dioxins is opposed. Dioxins occur naturally largely from bush fires. In addition, hazard reduction burning is claimed to be the largest man made dioxin source<sup>1</sup>, and are largely undertaken by government agencies. Cross contamination is an issue and needs to be put into perspective when considering threshold levels. There appears to be a double standard for investigations of dioxins from bush fire or hazard reduction burning as opposed to industrial sites. As a consequence, sites should only be screened for contaminants based on history and other supportive evidence.

AEBN is concerned that contaminated land treatment processes are subject to considerable scrutiny, evaluation reports and other processes, which slows down the process of cleaning up dioxin or other POPs. In contrast, State government have installed no controls, management systems to reduce the emissions of dioxins and POPs from bush fires. Even simple actions such as picking up litter which may contain PVC or other chlorine sources appears not to have been considered. This lack of action is not compliant with *Article 5 Measures to reduce or eliminate releases from unintentional production* of the Stockholm Convention.

Like asbestos the subjective arguments associated with dioxins need to be countered by strong science and clear limits. As a consequence *Option 2— Develop HILs in a prioritised fashion,*

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<sup>1</sup> *Regulatory Impact Statement, Proposed Amendments to the Protection of the Environment Operations (Clean Air) Regulation 2002. see table 5.17 pp 34*

*for all non-dioxin-like POPs that currently do not have one and Option 3— Develop HILs for dioxin-like POPs combined are preferred.*

Option 3 should also include a process whereby a site can be screened for likely dioxin and furan levels.

With regard to dioxins it is always preferable to have criteria than not to, given delays in developing criteria from first principles and gaining their acceptance. Given the emissions of dioxins and furans from bush fires the development of Option 3 should recognise this. Background levels of dioxins, partly as a result of the bushfire emissions require to be established prior to setting the HILs and EILs.

**R8 AEBN recommends:**

- **The adoption of *Option 2— Develop HILs in a prioritised fashion, for all non-dioxin-like POPs that currently do not have one and***
- ***Option 3— Develop HILs for dioxin-like POPs with contextual information for evaluating if a site should undergo testing.***

**9. DATA QUALITY OBJECTIVES, LACK OF VERTICAL DELINEATION**

AEBN supports *Option 2—Provide general guidance on identifying and considering DQOs without providing lists of DQOs for specific investigations.*

*Option 3—Provide detailed guidance on identifying and considering DQOs that includes a review of QA/QC procedures is also supported but will require time to develop.*

Guidance needs to consider varying scenarios and lists of DQOs for specific investigations and contaminants of concern. are preferred.

**R9 AEBN recommends:**

- **The adoption of *Option 2— Provide general guidance on identifying and considering DQOs without providing lists of DQOs for specific investigations and***
- ***Option 3— Provide detailed guidance on identifying and considering DQOs that includes a review of QA/QC procedures is also supported but will require time to develop over time.***

**10. DELINEATION AND CHARACTERISATION OF CONTAMINATION**

AEBN prefers *Option 2— Provide guidance on appropriate methods for establishing the vertical and lateral extent of the contamination.*

The collection and interpretation of data to estimate the extent of contamination requires a deal of professional judgement. As a result AEBN is concerned about being prescriptive with respect to assessment, because of high level of variability across sites. The large variations and issues that are site specific are considered in many cases beyond a modelling. Reliance on statistical models that do not recognise the inherent uncertainty and limitation of the data would be a significant issue.

It is worthwhile noting that clean up of contamination plumes should be undertaken accurately. Court cases have resulted in prosecution for underestimating the plume and also for overestimating it. Hence over servicing—digging and treating/disposal of too much soil is just as much a liability as not cleaning the site to a required standards.

**R10 AEBN recommends the adoption of *Option 2—Provide guidance on appropriate methods for establishing the vertical and lateral extent of the contamination, but notes that contextual notes should permit a substantial degree of variation to this given appropriate site variability based on professional assessment.***

## 11. LABORATORY METHODS

AEBN prefers *Option 3— Replace the present guidance with a list specifying which analytical procedure(s) should be used for the most commonly encountered contaminants, and provide guidance on how to select an analytical procedure for other contaminants .*

AEBN also supports *Option 4— Include within the NEPM a mechanism for periodically reviewing and updating the analytical methods to be used and for which contaminants* as it is consistent with recommendation 1 in this submission.

AEBN believes the interests of uniformity and comparability in the field outweigh the benefits of diversity.

### **R11 AEBN recommends:**

- **The adoption of *Option 3— Replace the present guidance with a list specifying which analytical procedure(s) should be used for the most commonly encountered contaminants, and provide guidance on how to select an analytical procedure for other contaminants and***
- ***Option 4— Include within the NEPM a mechanism for periodically reviewing and updating the analytical methods to be used and for which contaminants***

## 12. THIRD PARTY AUDITOR ACCEPTANCE AND COMPETENCY OF CONSULTANTS

AEBN supports *Option 3— Revise the guideline providing additional guidance on third party auditor/reviewer competency and accreditation issues.* Any measure to foster harmony or uniformity between the states is considered to be beneficial for environmental outcomes.

***R12 AEBN recommends Option 3— Revise the guideline providing additional guidance on third party auditor/reviewer competency and accreditation issues.***

## 13. SUMMARY

AEBN welcomes the opportunity to assist the Environment Protection and Heritage Council in developing a clearer and higher quality measures and supporting systems on contaminated site assessment.

Please contact me on 02 9453 3348 if you wish to discuss the recommendations and positions made by AEBN.

Yours Sincerely

*Andrew Doig*

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