

National Environment Protection (Assessment of Site Contamination) Measure 1999

FREQUENTLY ASKED QUESTIONS

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| Referencing of the ASC NEPM | How should I reference the new guidelines? | <p>National Environment Protection Measures (NEPMs) are legislative instruments and are available from the ComLaw website*</p> <p>Full citation: <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i></p> <p>(refer section 1 of the Measure http://www.comlaw.gov.au/Details/F2013C00288)</p> <p>Abbreviate to: 'ASC NEPM' to differentiate it from other NEPMs. If there is no likelihood of it being confused with any other NEPM, then it may be identified as 'NEPM' in reports etc.</p> |
| Referencing of the ASC NEPM | How should I distinguish between the original and amended versions of the NEPM in a report where the works have been completed both pre- and post-amendment? | <p>As the 'NEPM' now incorporates the amendments, you only need to differentiate when you are referring to the NEPM pre-amendment.</p> <p>Suggested in text referencing - 'NEPM 1999 (pre-2013 amendment)' or NEPM (pre-amendment)</p> |
| Asbestos health screening level | The definition of 'asbestos fines' includes free fibres (s.4.4) however the footnote to Table 7 says that the screening level [for FA and AF] is not applicable to free fibres. | The screening level of 0.001% for FA and AF applies to the quantification of these materials by gravimetric procedures. The footnote clarifies that this only applies where gravimetric procedures are able to quantify these materials. Quantification of fibre bundles and small fragments of bonded ACM is contemplated where conditions allow. The quantification of individual free fibres is not considered practicable and is not required. |
| EILs and ESLs | Are the EILs and ESLs still "single point" criteria, or is there | Although not explicitly stated in Schedule B1 Section 3.2, the information provided is intended to apply to both human health and ecological |

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| | scope for statistical evaluation? | criteria. It is important to note that statistics should be calculated for a relevant exposure area and soil unit etc. based on the conceptual site model. |
| EILs | Should an ambient background concentration (ABC) be included for fill materials? | A distinction should be made between uncontaminated natural materials from a known local source such as clay and sand used for levelling or landscaping purposes ('clean fill') and heterogenous fill of unknown origin. While it may be argued that an ABC could be calculated (via sampling and analysis) for clean fill of known origin and date of emplacement, it is not appropriate to calculate/derive an ABC for other types of fill. |
| EIL spreadsheet | Why does the EIL spreadsheet in the Toolbox present the added contaminant limits (ACLs) for fresh and aged lead as 'generic EILs' without the option to estimate the ambient background concentration (ABC)? | This is a flaw in the spreadsheet. The lead EIL can be calculated as per the procedure in Schedule B1 Section 2.5.10 ($EIL = ABC + ACL$) or refer to Schedule B5c which contains several example calculations for lead. Note that there is an error in Schedule B5c section 8.7.3.3 – the worked Example 1 (SQG based on LOEC and EC30), the ABC for lead is shown as 150 mg/kg for an old suburb with low traffic volume in South Australia. This should read 30 mg/kg and is displayed correctly as such in Table 67 on page 76. |
| EIL for copper | Is organic carbon data required to determine the added contaminant limit (ACL) for copper? | No, only pH and cation exchange capacity (CEC) are required. Refer to Appendix F in Schedule B5c for a more detailed explanation. |
| ESLs | Are the ESLs for xylene in Table 1B(6) correct? | The ESLs for xylene are correctly listed in Table 1B(6) - refer to the review by Michael Warne in the NEPM Toolbox http://www.scew.gov.au/node/941 Note that for xylene, the ESLs for coarse soil are higher than that for fine soil in contrast to the ESLs for benzene, toluene and ethylbenzene where the reverse is found. This is probably an artefact of the data as the xylene |

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| | | ESLs were derived from a small data set with associated natural variability. If a larger, more statistically sound data set were available, this effect may disappear. |
| GILs | No explanation is provided for why some GILs are based on 99% levels of protection and others on 95% levels of protection. | The GILs listed in Table 1C in Schedule B1 are those applicable to <i>'slightly – moderately disturbed ecosystems'</i> . Generally these are based on a 95% level of protection however, this is increased to 99% for some chemicals e.g. where chemicals have the potential to bioaccumulate or where the 95% value may not provide sufficient protection for key species. For further information refer to the <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000</i> (ANZECC & ARMCANZ 2000) |
| HILs | The derived HILs calculated in the HIL spreadsheet (available from the Toolbox) sometimes differ from those listed in Schedule B1 Table 1A(1) and Schedule B7 Table 2. What is the reason for this? | A policy decision was made that where the scientific information only supports a minor revision of the HIL by less than approximately 20%, or the new scientific data is not adequately robust, the original HIL was retained with no change (refer Schedule B7 section 1.4 for further information). The basis for deriving each HIL is described in the Appendices to Schedule B7 e.g. Appendix A1 section 1.5 on arsenic provides the rationale for retaining the original HIL for arsenic. |
| HIL for lead | What is the correct HIL for lead? The rows for lead are hidden on the HIL spreadsheet. | <p>The HILs for lead were derived from blood lead modelling (refer Schedule B7 Appendix D) which is the preferred methodology for calculating a site-specific HIL where this can be justified.</p> <p>The rationale for deriving the HIL for lead is included in Schedule B7 Appendix A1. The HILs for lead were reaffirmed and the original values retained.</p> <p>The HILs spreadsheet shows the calculated values using the assumptions described in Appendix A1 for lead and are included for transparency reasons.</p> |

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| Holding Times for VOCs | <p>The holding time of 14 days for VOCs in soil except VC, styrene and 2-chloroethyl vinyl ether (7 days) stated in Schedule B3 Table 1 'Recommended sample containers, holding times and condition of soil for analysis' are not consistent with the reference to AS 4482.1-2005 and AS4482.2-1999 in Schedule B2, Section 5.4.4 Sample handling, storage and transport.</p> <p>Which is correct?</p> | <p>The reference in Schedule B2 Section 5.4.4 to AS 4482.1-2005 and AS4482.2-1999 is included for general information. The statement has been amended to clarify that recommended maximum holding times are provided in Schedule B3 Table 1 (refer Errata).</p> |
| Gas tight sample containers for soils | <p>Can food-grade glass jars be used for analysing VOCs in soil?</p> | <p>Standard 125 mL or 250 mL glass jars with PTFE-lined lid can be used for high concentration samples (Schedule B3 section 4.3.1 as qualified by Chapter 4 of US EPA SW-846) otherwise 40 mL glass vials with PTFE-lined pierceable silicon septum caps are recommended.</p> |
| Analysis of petroleum hydrocarbons in soil | <p>Can the Canadian Council of Ministers for the Environment (CCME) <i>Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil – Tier 1 Method</i> be specifically included in Schedule B3?</p> <p>Rationale for inclusion: the Health Screening Levels (HSLs) (Schedule B1) are based on the CCME method which uses Soxlet extraction with hexane/acetone however this method is not explicitly included in the list of solvent extraction-based methods in Schedule B3 Section 10.2.8.2.</p> <p>Data from a current CRC CARE project on TRH measurement indicates that results for TRH measurement are strongly method dependent.</p> | <p>Alternative methods are permitted to be used where these can be demonstrated to be equivalent in outcome (refer Schedule B3 Section 2.4). The comment regarding results being strongly method dependent has been noted.</p> <p>Further consideration will be given to this issue when the results of the CRC CARE project are made available.</p> |
| Transport of contaminated samples – | <p>Should samples from contaminated sites be declared when freighting by air?</p> | <p>The ASC NEPM does not provide advice on safe transport practices. All samples must be properly packed, marked and if necessary declared</p> |

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| declaration on air way bills | | <p>when sending by air.</p> <p>The Civil Aviation Safety Regulations Part 92 prescribes the minimum safety requirements for the consignment and carriage of Dangerous Goods by air. It includes training, documentation, record keeping and incident reporting as well as provisions for packaging, marking, labeling, loading of and stowage in aircraft.</p> <p>http://www.casa.gov.au/scripts/nc.dll?WCMS:STANDARD::pc=PC_91038</p> |
| Use of statistics in the case studies | <p>In Case Study 3, it is not clear why the geometric mean only is compared with the ESLs, HSLs and management limits when Schedule B1 Section 3.2.1 states that a range of statistics should be considered.</p> | <p>The treatment of statistics in the case studies has been simplified compared with the recommended procedure included in Schedule B1 Section 3.2.1 and Schedule B2 Section 13 which state that the preferred approach is to consider a range of statistics.</p> <p>Note also the preamble to the case studies:</p> <p><i>'For the purposes of illustration, selected summary data only is presented and it can be assumed that the raw data has been evaluated in accordance with the guidance in Section 13 Schedule B2 and that the data has been assessed as being accurate and representative of the site.'</i></p> |

* NEPM Schedules available from:

<http://www.comlaw.gov.au/Browse/Results/ByTitle/LegislativeInstruments/Current/Na/0/National%20Environment%20Protection/>