



21 October 2003

The EHC Act Review
Environment Protection Authority
PO Box A290
SYDNEY SOUTH NSW 1232

Dear Sir/Madame

The Australian Environment Business Network (AEBN) welcomes the opportunity to comment on the Environmentally Hazardous Chemicals Act Review.

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.

1. INTRODUCTION

Management of chemicals has undergone substantial changes since the introduction of the EHC Act in 1985. The discussion paper points out that the introduction of the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) replaced at the Federal level a major role of the EHC Act in the assessment of chemicals for use in products or manufacturing. In addition the implementation since then of the Occupational Health and Safety National Standard on Hazardous Chemicals has largely dealt with workplace controls of chemicals. The progressive introduction of the National Management Plans (NMPs) for PCBs, HCB and OCPs¹ has further overlapped other functions of the EHC Act. The only role left for the EHC act appears to be selective regulation of some chemicals, which adversely affect the environment. The Pesticide Act, also administered by the DEC, also controls control of environmental fate of chemicals.

However, other federal mechanisms also manage environmental harmful chemicals, such as the National Environment Protection Measures (NEPM), especially the NEPM on Contaminated Site Assessment. Additionally the Australian Water Quality Guidelines also set national standards, which should also directly influence the implementation of the EHC Act.

The EHC Act was introduced to cover a variety of issues in 1985 largely dealing with the topical environmental chemicals at the time such as PCBs and dioxins. It also formed part of the old style legislation package that managed contaminated land. The Contaminated Land Management Act and changes to planning legislation, such as State Environment Planning Policy 55, have replaced the control of contaminated land issues under the EHC Act. However, some of this mechanism still resides in the EHC Act, at least in implementation and industry finds an overlap between the EHC Act and other polices and legislation dealing with contaminated site issues.

2 OBJECTIVES OF THE EHC ACT

Clearly the EHC Act has undergone major changes to its role, especially the dropping—in part—of contaminated land management controls. However continuing application of the Act to contaminated land has resulted in apparent conflict between risk based soil reuse criteria and

¹ HCB – hexachlorobenzene; PCBs – Polychlorinatedbiphenols; – OCPs Organic Chlorinated Pesticides

regulatory based waste classification, which continues to cause confusion, conflict and unproductive regulatory involvement in the area of land remediation.

Establishing objectives could improve its purpose and position in the framework of NSW and Federal legislation. Perhaps it should contain simple objectives such as to reflect consistency with federally driven laws, National Environment Protection Measures, National Management Plans and other policy documents prepared by the Environment Protection and Heritage Council. The objectives should also delineate the EHC Act and its role from other pieces of legislation.

RI *AEBN recommends that the objectives of the EHC Act be used to clarify its role:*

- *In the management of environmentally hazardous chemicals*
- *To be consistent with national legislation and guidance materials*

3. OVERLAP BETWEEN EHC ACT AND OTHER LAWS, REGULATIONS AND POLICIES

One of the major areas of difficulty is the overlap between the EHC Act and other regulations, and national standards and codes of practice. Most notable of these is the conflict with the National Environment Protection Measure Assessment of Contaminated Site Criteria, which deals with contaminated land or soil and the National Management Plans for PCBs, HCB and OCPs, which deal with concentrated chemical wastes. The EHC Act and its CCOs on the other hand do not distinguish between contaminated soil and concentrated chemical wastes.

Case study DDT.

Hypothetical case: A contaminated site (not a cattle tick dip site) contains DDT and other scheduled chemicals. A number of hot spots where the DDT concentration is 150 mg/kg have been isolated in 400 tonnes of contaminated soils. This equates to 60 kg of DDT in soil.

How do we manage the contaminated site?

The Scheduled Chemical Waste Chemical Control Order defines:

4.11 scheduled chemical wastes

means any waste liquid, sludge or solid (including waste articles and containers) which contain one or more of the constituents listed in Schedule "A" where the total concentration of those constituents is more than one milligram per kilogram.

Therefore if the DDT contaminated 400 tonnes is managed as a waste it is considered to be a scheduled chemical waste. In addition for DDT and any other listed scheduled chemical:

6.3.2 where more than fifty kilograms but less than one tonne of scheduled chemical wastes (in aggregate) are kept or proposed to be kept in or on any premises:

- (a) the scheduled chemical wastes storage area must be sited and constructed so as to prevent any discharge of scheduled chemical wastes from the storage area into the external environment;*
- (b) the occupier of the premises must ensure that an adequate supply of personal protective equipment (such as respirators, overalls, gloves, goggles and boots) is available to be used by any person handling scheduled chemical wastes; and*
- (c) the occupier of the premises must provide written notification to the EPA of the identity, amount and location of the scheduled chemical wastes kept in or on the premises. The notification shall be made to the EPA at the time that the amount of scheduled chemical wastes being kept in or on the premises becomes greater than fifty kilograms and thereafter annually.*

Therefore the 400 tonnes would need to be stored in the appropriate manner stated in section 6.3.2. This is only triggered if the 400 tonnes is declared a waste. Furthermore if the site with the 400 tonnes of soil is disturbed and declared as waste it will require the DEC to issue a licence under the EHC Act. A large cost burden for both the landowner and the DEC to administer. So what criteria apply if the soil is not declared a waste and can be kept in situ? The main document of reference is Schedule B (7a) Guideline on Health-Based Investigation Levels. Table 11-A shows that DDT levels of above 200 mg/kg are the lowest investigation level. :

Table 11-A

Proposed Health-based^a Soil Guidelines for Individual Substances

Substance	Health-based Investigation Levels ^b (mg/kg)						Health-based Response Levels (mg/kg)
	A	B ^c	C ^d	D	E	F	
DDT+DDD+DDE	200			800	400	1000	

- A. Standard residential with garden/accessible soil (home-grown produce contributing less than 10% of vegetable and fruit intake; no poultry): this category includes children's day-care centres, kindergartens, pre-schools and primary schools.
- B. Residential with substantial vegetable garden (contributing 10% or more of vegetable and fruit intake) and/or poultry providing any egg or poultry intake.
- C. Residential with substantial vegetable garden (contributing 10% or more of vegetable and fruit intake); poultry excluded.
- D. Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise apartments and flats.
- E. Parks, recreational open space and playing fields; includes secondary schools.
- F. Commercial/Industrial: includes premises such as shops and offices as well as factories and industrial sites. It is assumed that thirty years is the duration of exposure.

The investigation limits use conservative levels based on health risk assessment for triggering investigation. They are not clean up levels but an indicator that further risk assessment needs to be undertaken on the site. When site-specific risk assessment criteria is included in a site risk assessment the clean up level in most cases results in a higher limit. Therefore on most sites the investigation levels would also be used as remediation levels because of the cost, time and complexity to establish and negotiate site-specific criteria.

Triggering hazardous waste

If the soil is disturbed and redistributed, it is considered to be a hazardous waste under the Waste Guidelines which declare that any chemical waste subject to a CCO and is not permitted to be disposed of to landfill. The trigger level for wastes not permitted to go to a landfill is 50 mg/kg from SCW CCO 6.5 and restated below:

6.5 Disposing of scheduled chemical wastes

6.5.1 The disposing of sludge or solid scheduled chemical wastes by:

- (a) an approved process, under the authority of, and in accordance with the conditions of a licence; or
- (b) burial in a controlled landfill in an approved manner, where the total concentration of constituents in the waste is less than fifty milligrams per kilogram.

Conclusion

If the DDT contaminated soil is kept on site undisturbed it does not trigger even the most conservative investigation level for contaminated sites, which stands at 200 mg/kg. Hence the soil can stay there and be built on even for use as gardens or residential development.

However, if earthworks on the site is undertaken and the contaminated soil is disturbed it becomes a waste and subject to the SCW CCO and is defined as a hazardous waste under the Waste Guidelines. Therefore if it is transported off site it will require to be sent to a treatment facility. Even if it is to be relocated on site it cannot as that could be considered to be a landfill activity, which is not permitted under the POEO Act s144 as there is no threshold for hazardous wastes. So we have an interesting end point of being able to build gardens and residential dwellings on the site but not permitted to move the soil around the site.

The most recently published National Management Plan (for OCPs) (NMP) is structured to deal specifically with concentrated OCP wastes and refers contaminated soil to ‘relevant State and Territory legislation’ —which would include the EHC Act in NSW—and the NEPM on Assessment of Site Contamination. The EHC Act in NSW essentially parallels the NMP for OCPs in terms of definitions of disposal and destruction standards, except that it is applied to contaminated soils as well as concentrated wastes. As previously stated the existence of state and national instruments which overlap and conflict continues to produce confusion and unproductive regulatory involvement in the area of land remediation.

Thus while the NEPM allows reuse of the soil with OCPs below 1000 mg/kg, and the NMP requires OCP wastes to be treated to less than 2 mg/kg aggregate where practicable, the NSW EHC Act SCW CCO is interpreted to require that all concentrated wastes and soil be treated to less than 1 mg/kg aggregate of SCW compounds.

Thus the EPA NSW continues to use the 1 mg/kg limit as the treatment criterion for contaminated wastes and the clean up criterion for contaminated soils, which is clearly inconsistent with the soil reuse criteria in the NEPM on Assessment of Site Contamination and the NMPs for HCB, PCBs and OCPs².

R2 *AEBN recommends that the use of the CCOs:*

- *Be clarified especially when applied to remediation of contaminated sites*
- *Not to be used to manage contaminated sites where NEPMS or NMPs apply.*

The above case study demonstrates some of the difficulties companies have when they need to remediate contaminated sites that contain substances under the following CCOs:

- PCBs
- Dioxins
- Scheduled Chemical Wastes (SCW)

All these CCOs have significant impact on remediation of contaminated sites. All are old and inconsistent on the limits they use at a national and international level and urgently require be reviewing and updating.

R3 *AEBN recommends that the PCB, dioxin and Schedule Chemical Waste CCO be reviewed and made consistent with national guidelines and policies.*

3.1 Further issues with Scheduled Chemicals Waste CCO

The SCW CCO in particular lists many chemicals that are dioxin precursors, in order to identify potential dioxin contaminated sites, since analysis of dioxins was not commonly available at the time the CCO was formulated. Since dioxin analysis is now routinely available, it would now be appropriate to limit the CCO to chemicals of environmental significance, and remove chemicals that appear only as dioxin surrogates.

R4 *AEBN recommends that the chemicals listed in the Schedule Chemical Waste CCO be reviewed, so that the CCO is focused on environmentally hazardous chemicals and omit precursors.*

The 1 mg/kg “non-waste” limit in the SCW CCO extends to cover all 25 scheduled chemicals in aggregate if present. As previously stated some of the chemical on the list now appear to be present unnecessarily because they are dioxin precursors, rather than environmental hazardous chemicals. Since sites exist that are contaminated with 20 or more of the chemicals currently on the SCW CCO, this requires a detection limit and clean up standard of at least below 0.04 mg/kg to meet the 1 mg/kg aggregate requirement. This is below the detection

² HCB – hexachlorobenzene; PCBs – Polychlorinatedbiphenols; – OCPs Organic Chlorinated Pesticides
AEBN’s Submission to the EPA on the EHC Act

limit for many of these chemicals and below the destruction capability of many cost effective non-incineration destruction technologies, particularly for remediation of relatively low levels of contaminants in soil.

Many of the above issues, which appear to be regulatory rather than environmental issues would be resolved by managing contaminated soil under the NEPM on Assessment of Site Contamination (rather than the SCW CCO), and/or formally introducing and defining the notion of practicability (which appears in the NMPs) in relation to treatment standards in the CCOs if they continue to applied to contaminated soils.

R5 *AEBN recommends that:*

- *The PCB, dioxin and Schedule Chemical Waste CCOs deal with concentrated wastes and not contaminated soils.*
- *The EHC Act be amended to permit use of flexible approaches, such as best available technology economic achievability (BATEA) to best approach of the limits set out in the CCO where treatment technologies are required.*

4. EHC ACT LICENCES

Again the EHC Act can spill over into contaminated site remediation. If the mass quantities are exceeded, 50 kg under the SCW CCO, at a contaminated site then a licence is triggered under the EHC Act. The DEC has also insisted that laboratory scale testing of future remediation technologies for scheduled chemicals be licensed under the EHC Act, because in the broadest possible interpretation the EHC Act can be taken to include laboratory scale testing. The national protocols for licensing Schedule X treatment facilities of Schedule X treatment trials specifically exclude laboratory scale testing. Thus the NSW approach could be argued to be unnecessarily conservative and/or bureaucratic.

Given the long process for review of CCOs and other legislative changes a short term solution is the development of a policy document in which the DEC can publicly identify how it will use CCOs on contaminated land issues. AEBN also considers that the DEC at least permits input from various stakeholders in the development process of such a policy.

R6 *AEBN recommends that:*

- *The EHC Act be amended to permit application for the exclusion of Laboratory scale trials of Schedule X destruction technologies from CCO controls.*
- *The DEC develop a public policy document on how the EHC Act and its CCOs are to be used on contaminates sites and associated projects.*

Should you wish to discuss the above recommendations please contact me on (02) 9924 7515.

Yours sincerely

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